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TRANSPACE

An architectural intervention for people in transition

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Identity, belonging and being are some of the aspects inventively explored in this document. In times of fundamental change, people tend to find a space, lose it and then find another space as life and the world transform around them.
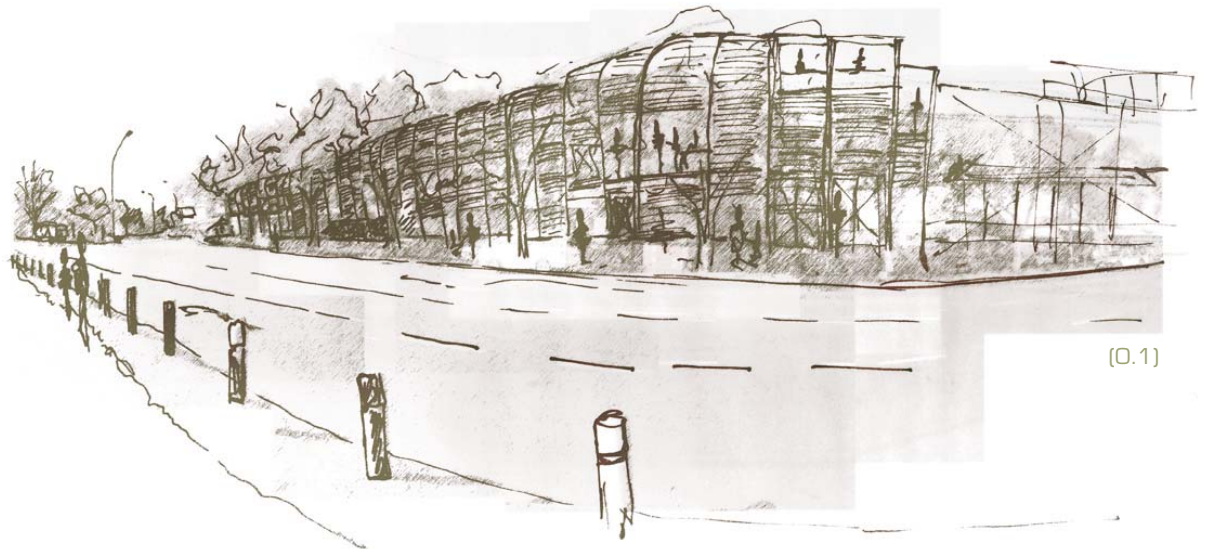
What does this metamorphosis entail and in what ways are we affected by it? How do we live through it and what may we become on our journey towards each other, particularly when the space and places from which we depart are – at least on the surface – so vastly different?

Within our voyages of transitional discovery, we too often repudiate the underlying structure from which our values, norms and standards are born – the configuration of beliefs that, when being threatened, results in conflict, bringing forth anger and dispute.

The proposed discourse initiates another way of being by concretizing phenomenological philosopher Martin Heidegger's notion of dwelling. Heidegger's major means of investigation is etymological, where he investigates the word history of 'to build', and its links to dwelling. He argues that as human beings, we cannot fail to dwell, for dwelling ultimately, is the essential existential core of human being-in-the-word from which there is no escape. However, a major problem with dwelling as an idea is its lack of specificity.
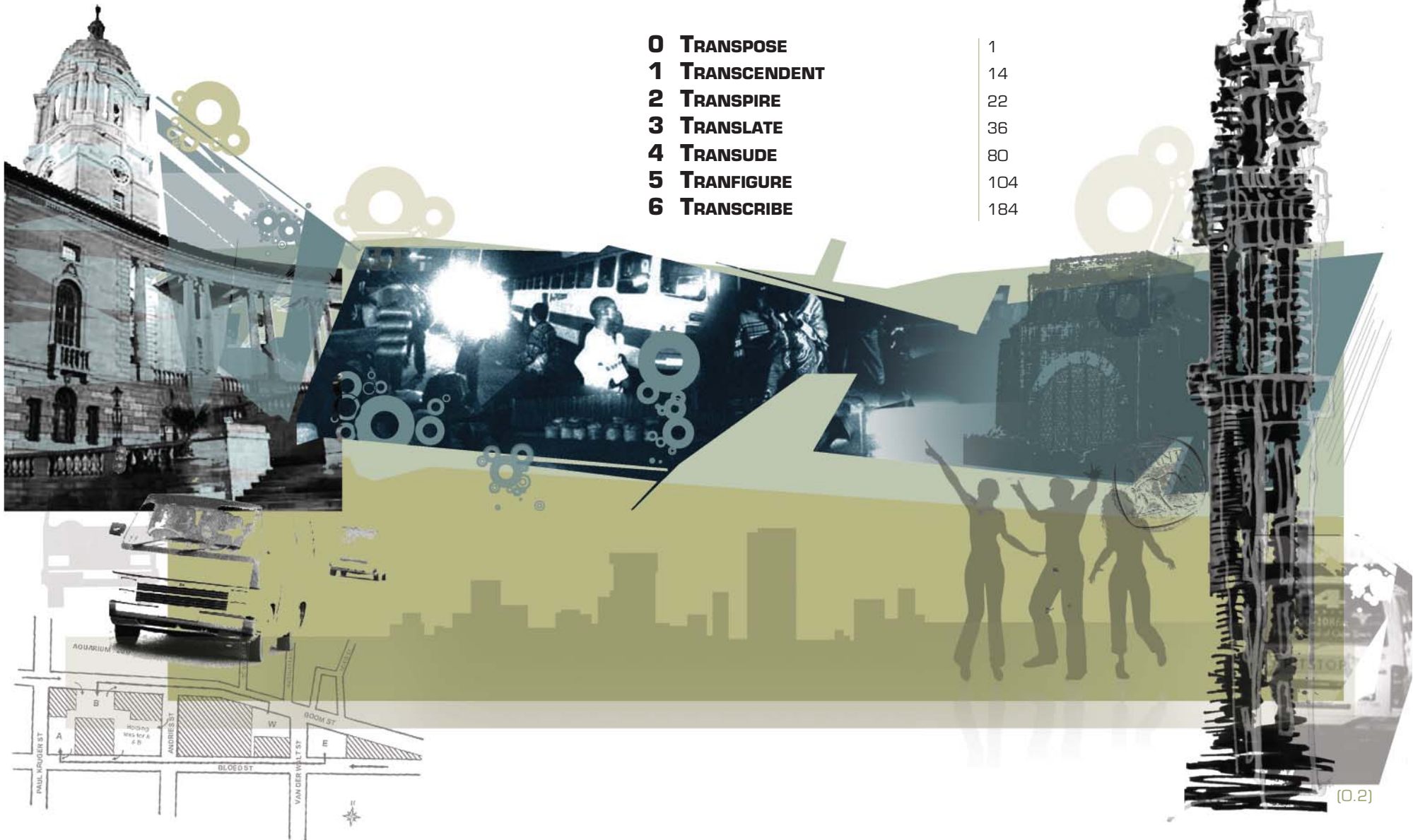
The discourse accordingly explores the contributions made by American architect Christopher Alexander, indicating important ways in which Heidegger's dwelling can be translated into more grounded architectural meaning. Within the urban context, the design addresses these fundamental structures of being and the predicaments experienced between people and place.

(0.1)

(0.2)

5 Transfigure

1

TRANSCENDENT

Introduction

transcendent *vb* that which is beyond our senses and experience;
existing apart from matter

> It is my belief that we live to express. The whole motivation of presence is to express. And what nature gives us is the instrument of expression which we all know as ourselves, which is like giving the instrument upon which the song of the soul can be played.
> (Kahn 1964: 19)

> . . . Kahn thus takes the total 'Being-in-the-world' as his point of departure, and defines our human task as the uncovering of its structure. Thereby he indeed comes close to the philosophy of Heidegger, who was also deeply concerned with "beginnings." (Norberg-Schulz 1988:202)

The first time that the author became familiar with the term 'dwelling' was during her undergraduate studies the day when Heidegger stepped into the lecture room with the echoes of 'Building, dwelling, thinking'; an essay that will perhaps forever rumble within the author's basic understanding of architecture. The knowledge gathered from those few lectures might have been rudimentary, but profound enough to bind the author's idea of architecture to something more than 'existence' only. This premise, although emphasizing the idea of dwelling, will not begin with Heidegger.

During her research, the author came upon some interesting writings on the American master architect, Louis I. Kahn; where within his work a 'theory' of architecture emerges. Kahn was engaged in a search for the structure of being parallel to Heidegger. It is certainly not worked out in detail, but the basic structure is coherent.

As part of the preface to this premise, I want to introduce the notion of culture as opposed to art and communication, keeping in mind Kahn's expressionists theory, as mentioned above.

1.1.1 Art, Communication, Culture

From the dawn of humanity, mankind has made and been fascinated by a strange and unique concept: the idea of art. This phenomenon has no immediate, practical use; it feeds no mouths and protects no young. Yet even in the most primitive cave-dwellings of 30,000 years ago, we have evidence of artwork (Tindale & Lindsay 1963:18). Though these cave drawings may be completely different from the naturalistic masterpieces of the Renaissance, and those still very unlike the abstract images of today, all fit into the broad genre of art called painting. What do these have in common? Why do we call them all "art?"

> At its most basic, art is a form of communication. Art is an expression of emotion, designed by a human as a means of communicating that emotion to other humans. (Edwards 1987:44)

Art is by far the most expressive form of communication that humans understand. The shading and colours of a picture, the moving lines in the body of a dancer, or the fluid harmonies of a song reach a depth that simple conversation never can.

In short, one can argue that art is representation through communication which in turn leads to a shared meaning or understanding. But this shared meaning or understanding is bound to culture:

> Of all species of animals, the argument goes; humans are unique in that they occupy something extra, something that animals don't have. And it is precisely by this 'excess' that we are inclined to define the scope of our common humanity. (Ingold, 2000:89)

Richard Shweder (1990: 2) calls this something extra, 'intentional worlds'. Thus, within this world, things do not exist 'in themselves', as different objects, but only as they are given form or meaning within systems of mental representations. And this is not a new debate, because this additional factor – call it mind or self-awareness – is part of the knowledge we have of our identities, our feelings, memories, intentions and ourselves.

Ingold (2000: 40) derived a definition for 'culture' from this same concept of humans as the divine creature:

> Thus, for such individuals (belonging to different 'intentional worlds') the same objects in the same physical surroundings may mean quite different things. And when people act towards these objects, or with them in mind, their actions respond to the ways the are already appropriated, categorized or valorized in terms of a particular, pre-existent design. That design, transmitted across the generations…and manifested physically in the artificial products of their implementation, is what is commonly known as 'culture'.

We hold mental representations that classify and organise the world (whether fact or fiction), people, objects and events into meaningful categories so that we can meaningfully comprehend the world. Thus, the conceptual map of meaning and language are the basis of representation; concepts organised, arranged and classified into complex relation to one another. It allows you to distinguish your own individual interpretation of the world, at the same time as holding similar views to that of other people in your culture.

We cannot express or communicate this meaning without the second system of representation, language. Language is the only way in which meanings can be effectively exchanged between people, as people within the same culture are able to interpret the sign of language in the same manner. The meanings become natural through the conditioning of culture.

not at which
something stops

something begins
its presencing

boundary

(1.1)

time

conflict

moment of
transit

space

being in the beyond
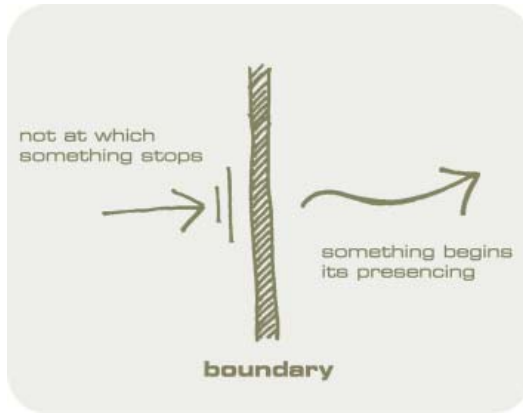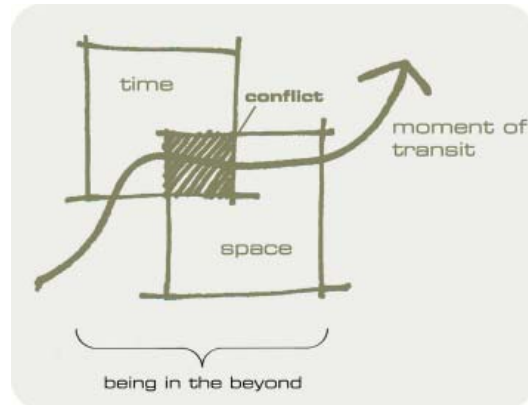
(1.2)

Figure (1.1) and (1.2):
Illustrating diagrammatically
the concept of the boundary
and a moment in transit

1.1.2 The Art of the Present

A boundary is not something that at which
something stops but, as the Greeks recognized,
the boundary is that from which something
begins its presencing.
Heidegger – Building, dwelling, thinking.
(Hofstadter 1979:145)

It is the trope of our time to locate the question
of culture in the realm of the beyond. Our
existence these days is marked by a tenebrous
sense of survival; living on the borderlines of the
'present', for which there seems to be no proper
name other than the current and controversial
shiftiness of the prefix 'post': postmodernism,
postcolonialism, postapartheid…

The 'beyond' is neither a new horizon, nor a
leaving behind of the past. The 'beginning' and
the 'end', is mostly just a myth experienced in
the 'middle', but in the 'beyond' we find ourselves
in a moment of transit, where space and time
cross to produce conflict between difference
and identity, past and present, inside and
outside, inclusion and exclusion.

We tend to convince ourselves erroneously
that by living within this moment of transit, the
'beyond', we are in fact done with that which
lies behind us.

'Beyond' signifies spatial distance, marks
progress, promises the future; but our
perception of exceeding the boundary – the
very fact of going beyond – is unknowable,
without a return to the 'present' which, in the
process of repetition, becomes disjunctive
and displaced. We fervently want to be
surrounded by that which is familiar, for there
is a sense of disorientation, a disturbance
of direction, in the 'beyond': an exploratory,
restless movement with an indefinite sense of
belonging. The question arises: Within the
process of transitional discovery, how do we
commemorate and brake with the past, and
momentarily dream into the future?

Transition, within the context of South Africa, is
the name typically given to this time of radical
change following the undoing of Apartheid,
connoting a shift from a political partition
to universal acceptance and justice. It can
additionally be seen as our existence 'beyond'
our country's brutal past. But as subject of this
research, transition is also a culture in its own
right - with its own conflict, repressions, and
unrealised potentials. The author thus aims
to indicate transition as a culture of power and
view it in its complex relation to the ways in
which it articulates social change.

1.1.3 In-between the City

The conflicting emotions of apprehension and excitement are the heart of the urban experience. The city is a landscape of cultural diversity and subcultural differentiation, thus, a mosaic of social worlds. In its various 'real' and 'imagined' forms, therefore, it is at once dammed, tolerated, manipulated and celebrated.

Culture is an essential part of the conflict that can be experienced when different social worlds meet. Cultures are like underground rivers that run through our lives and relationships, giving us messages that shape our perceptions, attributions, judgements, and ideas of self and other. Though cultures are powerful, they are often unconscious, influencing conflict and attempts to resolve conflict in imperceptible ways. However, we need to move away from the primary conceptual and organisational categories of 'race' and 'gender'. We need to think beyond these narratives and focus on those moments or processes that are produced in the articulation of cultural differences. These moments can be seen as 'in between' spaces, which initiate new signs of identity in the act of defining the idea of society itself.

I am part of my complete country. My hands neither ordering nor begging. Making the cross, liberation spiking my blood with belonging. (Krog 2003:31)

The idea of a space which can accommodate different voices and in which all South Africans can 'come to rest', raises the question of a national identity apart from a personal identity. Krog's text represents a special case of constructing an identity in a time of transition. In her case it happens especially by means of a confrontation with spatial concepts like space, landscape, land and country, presenting ample proof that space is indeed one of the important axes along which identity is constructed. Although there seems to be a desire for closure in the passion to belong, the project of re-constructing an identity is an ongoing process of transformation and change.

My throat feels thick and ostracized, my chest hurts with the indescribable intimacy of belonging and loss. This is my place. Place that in a way never really wanted me. Place that bore my love so fruitlessly. For its veld. For its sky. For its spruits. For its grass and trees. For its horizon, which carries every other horizon I have dreamt of. A love that longs for land. They can sell it, take it, divide it, pawn it, waste it. That will be all right. If only, until I die, I can come and site here. So quite, so here. So completely dissolved into where I belong. I will never lay claim to it. Ever. (ibid.)
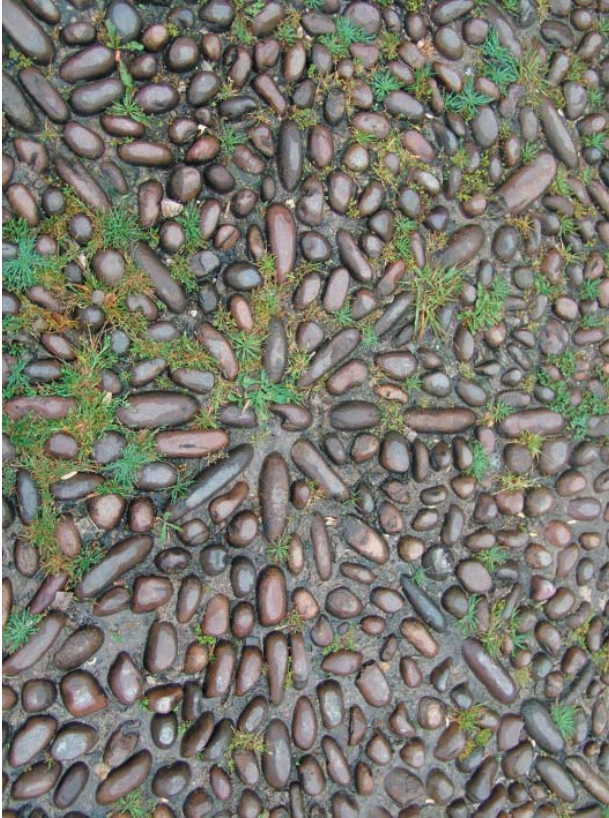
(1.3)

Figure (1.3)
The concepts of interstices presented as rock and soil

Krog felt compelled by the process of the Truth and Reconciliation Commission to construct a new identity for herself. This she does by reacquainting herself with and re-assessing the spaces, places and landscapes that previously constituted her identity. Trinh T. Minh-ha has written: 'Identity is a way of re-departing. Rather, the return to a denied heritage allows one to start again with different re-departures, different pauses, different arrivals' (1990:328). Re-visiting spaces, places, landscapes and the country she has known all her life enables Krog to use the South African 'landscape as a shifting strategic source of identification without implying the adoption of … a fixed, natural, or inherent identity' (Nash 1994: 239).

It is in this sense that the boundary becomes the place from which something begins its presencing in a movement not dissimilar to the ambulant, ambivalent articulation of the beyond that have been drawn out:

> 'Always and ever differently the bridge escorts the lingering and hastening ways of men to and fro, so that they may get to other banks…. The bridge gathers as a passage that crosses.' (Hofstadter 1979: 145)

Social differences are not simply given to experience through an already authenticated cultural tradition; they take you 'beyond' yourself in order to return, in a spirit of revision and reconstruction, to the conditions of the present.

Being in the 'beyond', then, is to inhabit an intervening space, as any dictionary will tell you. But to dwell 'in the beyond' is also to be part of a revisionary time, a return to the present to re-describe our cultural contemporaneity; to reinscribe our human, historic commonality; to touch the future on its hither side. In that sense then, the intervening space 'beyond', becomes a space of intervention in the here and now. To engage with such invention, and intervention, demands an encounter with 'newness' that is not part of the continuum of past and present. It can not simply recall the past as social cause or aesthetic precedent; it renews the past, refiguring it as a contingent 'in-between' space, that innovates and interrupts the performance of the present. The 'past-present' becomes part of the necessity, not nostalgia, of living.
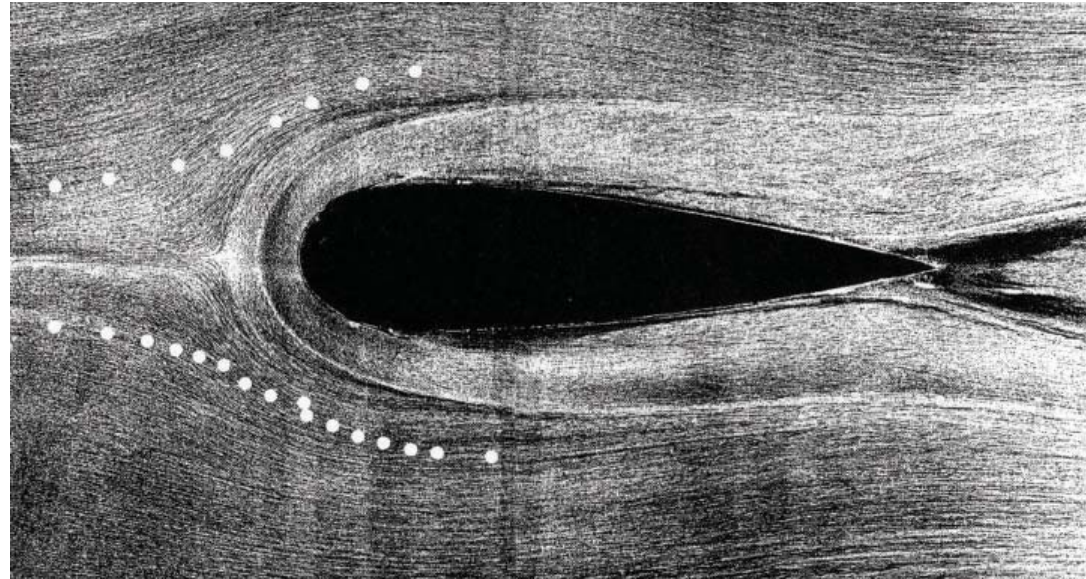
(1.4)

Figure (1.4)
"There is a place where there is no change and the transition envelopes the whole."

2

TRANSPIRE

Problem statement

transpire *vb* to come to light; become known

2.1_Re-organisation of Space

In the terrain of geography – in space – many authors write of the new organisations of space and in part relate it to globalisation. Features related to globalisation might include changing patterns of city growth and in particular geographical 'sprawl' and an increasingly polycentric urban form (Kloosterman and Mustard, 2001). However, in South Africa one thing does seem to be clear, which is that long-term suburban growth has continued, indeed accelerated, over the recent past. 'Suburban' in this context means non-old-core-city forms of growth, and does not necessarily mean growth in local government areas separated from older city areas such as the CBD. Suburban sprawl and decentralisation from the CBD by choice can be credited to two main reasons, firstly, the middle class families seeking larger personal and intimate territories and secondly; fears of overcrowding, parallel to the fear of the poor and racially different people (Madanipour 2003:47).

For many, the inner city of Tshwane has become a debased version of an ideal; some perceive the CBD to be a dangerous slum, detached from their suburban utopias. The undoing of Apartheid, especially the spatial segregation of 'races,' brought forth a redefinition of urban culture within this context. However, it is generally acknowledged that the inner city of Tshwane is currently not a provocative terrain to contemplate central experiences and the idea of the African Capital City (Tshwane Inner City Development and Regeneration Strategy, 2006). The metropolis is an environment of cultural inequality, and this rising inequality has led to a climate of fear, which has become a high-security fortress. But for a large sector, however, the city still means financial income and social interaction. Residing far from the inner city is a matter of choice for some, but for others, is forced upon them by the Apartheid regime. For this group of individuals, the CBD remains a focal arena for the contemplation of the human condition and man's struggle for self-expression.

(2.1)
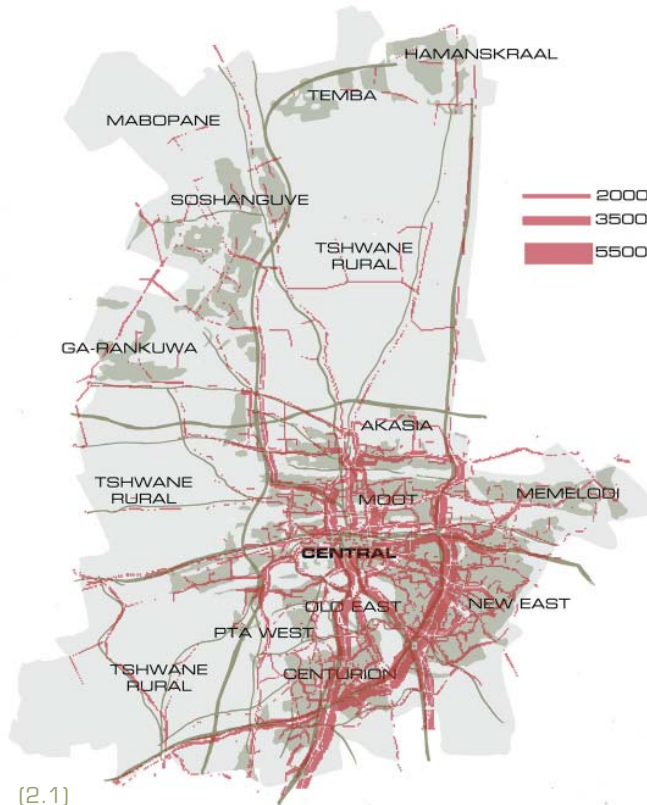
Figure (2.1):
Peak hour passengers by private vehicles around the inner city of Tshwane

2.1.1 The Transitional Context

Countless commuters travel to the city on a daily basis from areas reaching as far as Soshanguve and Temba. A traffic survey completed in March 2004 by the City of Tshwane, indicated that more than 86 400 people cross the Magaliesberg in the morning peak hour between the R511 road (Brits road) and K69 (near Mamelodi). This is only in the southbound direction. 67,2% of these commuters rely on public transport for their daily travels (City of Tshwane Integrated Transport plan 2004:17).

The use of private vehicles, often carrying only a single individual, is a major cause of traffic congestion within the centre areas of the inner city. Cars give people wonderful freedom and increase their opportunities, but the majority of the commuters traveling to the CBD of Tshwane, are financially incapable of having this luxury.

The system of public transportation between suburb and CBD can only work if all the parts are well connected (Alexander, Ishikawa & Silverstein 1977:92). But usually, because of inapt management and agencies there is no incentive to do so. This becomes a general transportation problem.

A city contains a great number of places, distributed rather evenly across a two-dimensional sheet. The trips people want to make are typically between two or more points at random on this sheet, whether from home to work, or to alternative destinations within the work environment of the CDB. No one linear system can give direct connections between the vast possible numbers of point pairs in the city. It is therefore only possible for systems of public transportation to work, if there are rich connections between the great varieties of different systems.

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▲ METERED TAXI FACILITIES
● TAXI RANKS
▬ STATIONS
■ BUS STOPS
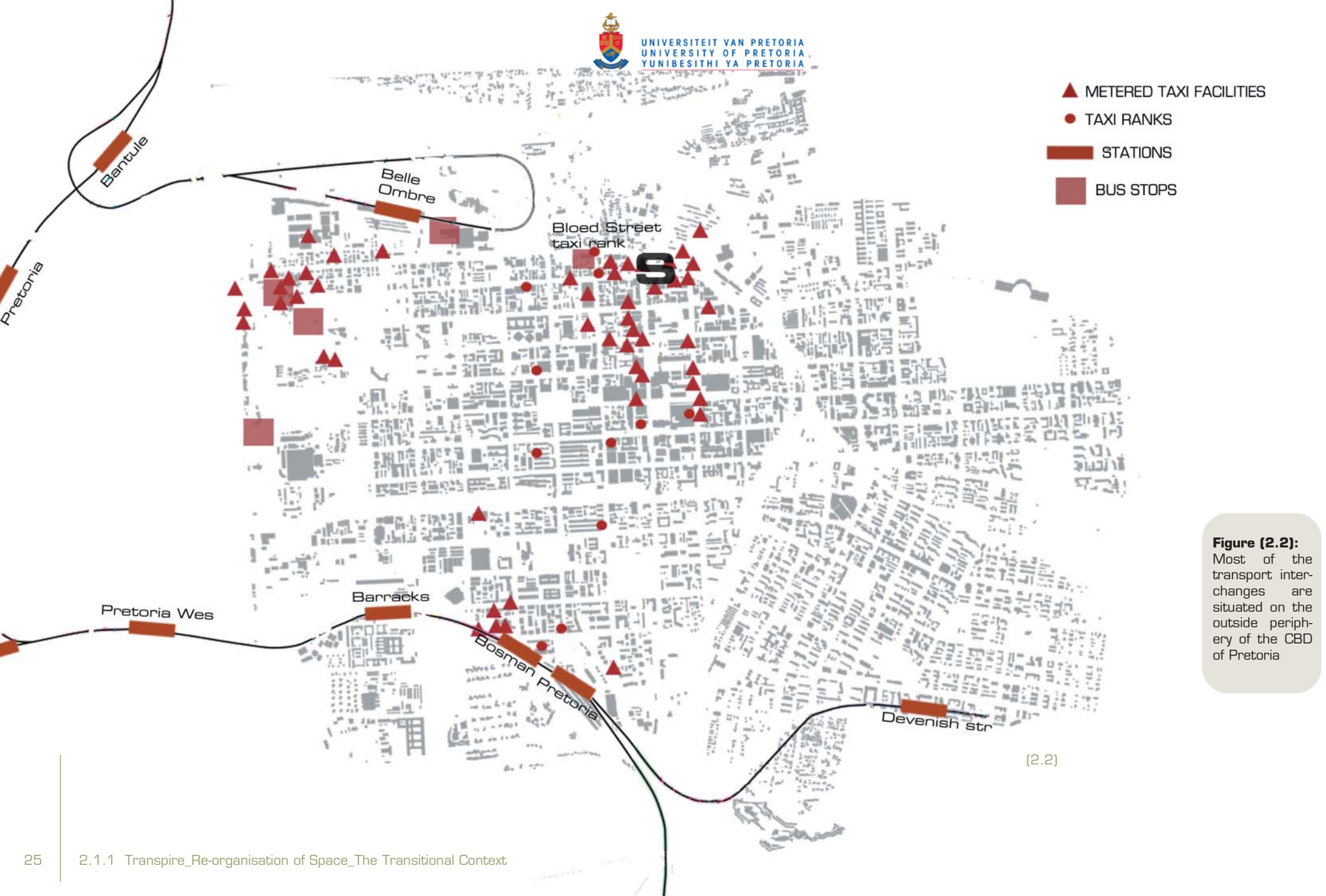
Figure (2.2):
Most of the transport interchanges are situated on the outside periphery of the CBD of Pretoria

(2.2)

Figure (2.3):
Peak hour bus volumes towards the CBD of Pretoria

Figure (2.4):
Peak hour passenger volumes by train
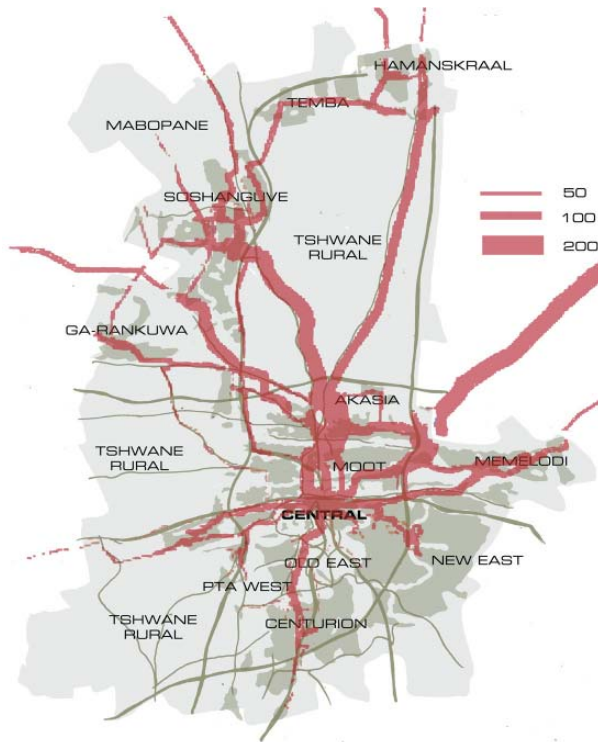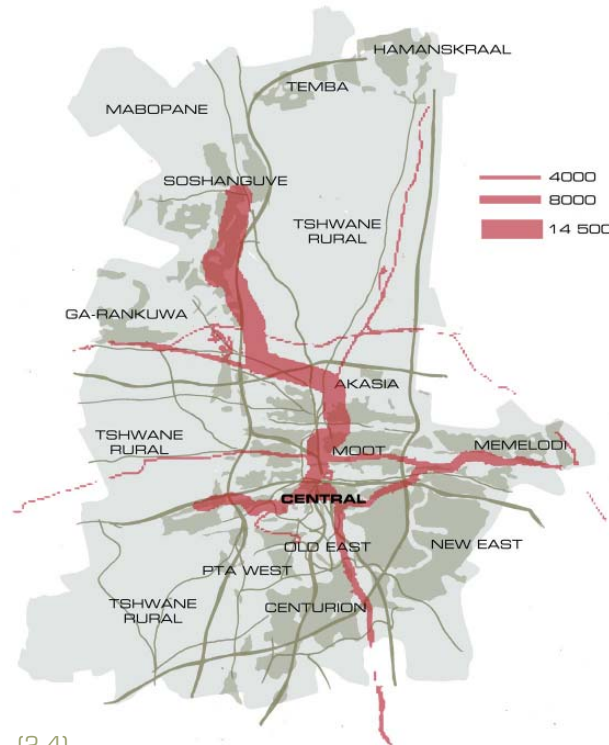
The routine of transition between home and work also exists as a non-linear system. Transportation nodes within the city of Tswhane are mostly located on the periphery, avoiding the congestion of the CBD (figure 2.2). This results in a further transitional line, taking place between the transportation interchange and the final destination within the CBD. In addition, the travel medium often varies between these different transitional lines. Trains, busses and taxis are the means of transport between the suburbs and the major transport interchanges, whereas for the smaller distances between the interchange and the inner city, most people tend to walk.

(2.3)

(2.4)

The traditional way of looking at public transportation assumes that these lines, along which one travels, are primary, and that the interchanges needed to connect the lines to one another are secondary (Alexander, Ishikawa & Silverstein 1977:93). A public transportation facility located on the interface of Pretoria would therefore be treated as a secondary element, and the routes connecting it with another interchange would be the primary element. There are two practically difficulties, both of which stem from the fact that different kinds of public transportation are usually in the hands of different agencies who are reluctant to cooperate. Firstly, trains, busses and taxis compete for the same passenger market along these corridors. When each mode is operated by an independent agency there is no particular incentive to provide feeder services to the more flexible modes. Secondly, most taxis provide public transportation along the main commuting corridors (figure 2.5), pulling passengers away from busses.

The solution hinges therefore on solving the coordination problem of the different systems (Alexander, Ishikawa & Silverstein 1977:93). Alexander (ibid) proposes an inverse of the traditional way of looking at public transportation lines, namely, that interchanges are treated as primary and that the transport lines along which are traveled, are secondary elements which connect these interchanges.

(2.5)
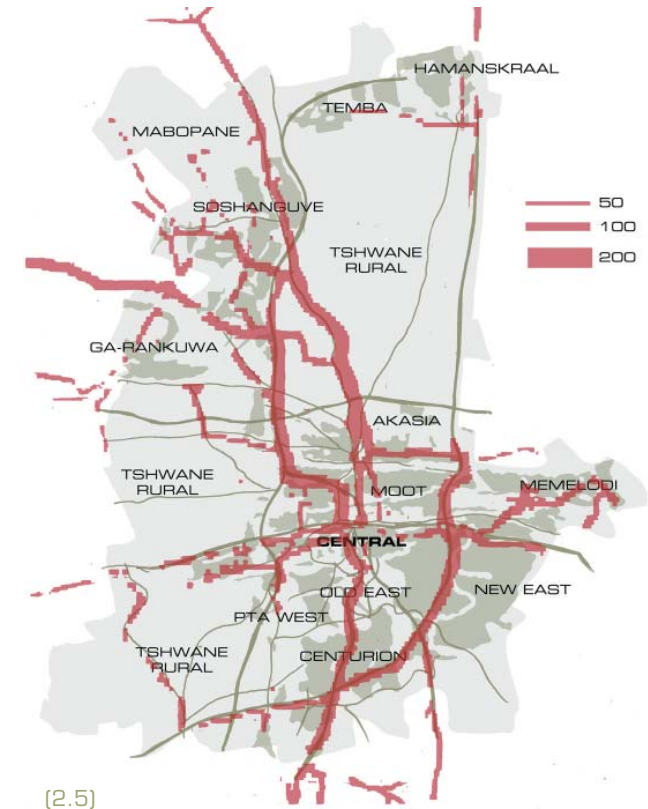
Figure (2.5):
Compared to figure 2.3 and 2.4, it is clear that the main taxi routes towards the CBD competes with the main bus- and rail routs

lines

stops

interchanges

(2.6)
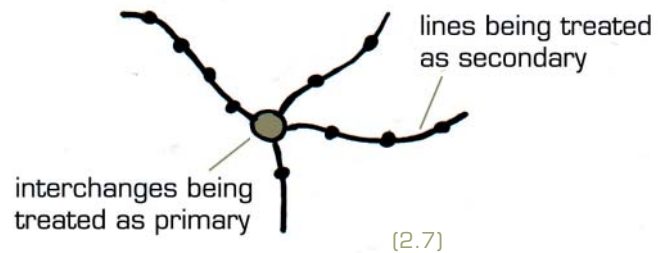
This dissertation aims to enrich the process of transition through re-delineating the transport interchange, to promote it as an activity node and to provide supportive facilities through focusing on the needs experienced by its users.

lines being treated as secondary

interchanges being treated as primary

(2.7)

treating the lines along which are travelled as primary, causes trafic congestion

the process of transition is enriched through re-delineating the transport interchange and to promote it as an activity node

(2.8)

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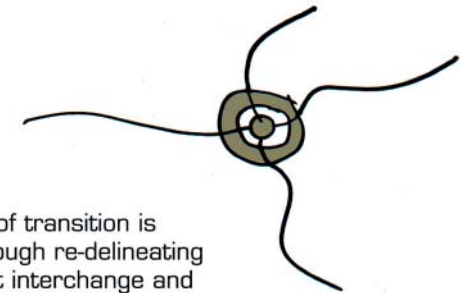
2.2.1 The Site Theoretically

The predominant quality which defines the site in relation to the theoretical argument is the concept of the edge, border or boundary. The significance of the convergence of these concepts emphasises the 'beyond'. In the 'beyond' we find ourselves in a moment of transit, where space and time cross to produce conflict between difference and identity, past and present, inside and outside, inclusion and exclusion. This conflict is not given to experience through an already authenticated tradition, but it takes you 'beyond' yourself in order to return, in a spirit of revision and reconstruction, to the conditions of the present. It is in this sense that the boundary becomes the place from which something begins its presencing.

This quality of the boundary which the site possess stimulates a sense of transition, a veil through which one moves which demands an encounter with 'newness' that is not part of the continuum of past and present. This interval which separates and indicates the difference between constitutes the boundary.

2.2.2 The Site Practically

Located adjacent to the proposed Bloed Street Taxi Retail Park, the site not only leads to a great amount of interaction with different cultural groups, but it becomes part of the routine of transition between home and work, eliminating the additional destination one needs to undertake for alternative services.

Figure (2.9):
Position of the site in relation to the CBD of Tshwane

(2.9)

2.3.1 The Theoretical Context as Program Generator
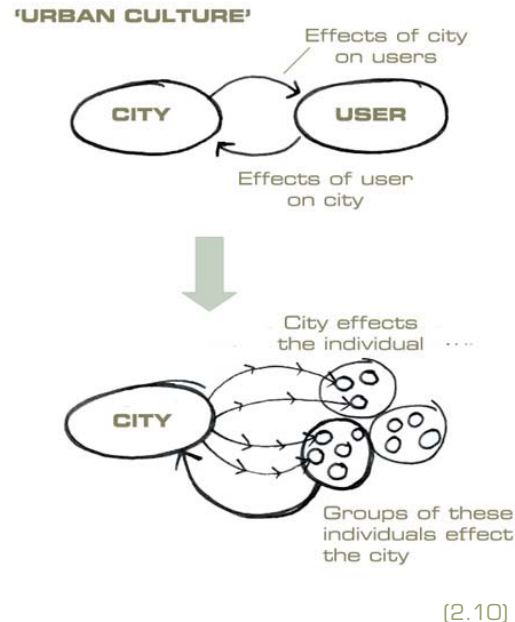
'URBAN CULTURE'

Figure (2.10):
Sketches illustrating the concept of urban culture

Culture has always been a significant part of what cities are and do. The visual culture expressed in architectural styles, monuments, and the designs of parks as well as the less formal culture offered by street musicians and artists in neighborhood festivals and fairs contribute to how cities feel and are experienced.

Urban culture accordingly, can have two levels of meaning: One level of how the city has impacted its citizens, businesses, social organisations, spatial organisations and artistic production. The second level would be the visa versa of above mentioned: How the citizens, businesses, social organisations, spatial organizations, etc. affects the city. Briefly one could say that (1) the city affects the individual and (2) groups of these individuals in turn change the city (figure 2.10).

We as human beings have the ability to produce and consume culture, whether through our physical environment or individual definition. We have the power to control behaviour and expression. The physical design of our homes, neighborhoods and communities shapes literally every aspect of our lives. There is an enormous power in design to change lives. Yet all too often one gets stunned by the power of modern technology and economic affluences that one loses sight of the fact that people and place matter.

As result of this interdependence between city and user, one can investigate the basic human aspects that define our existence. All individuals have needs that they strive to satisfy, and these essentials go beyond just food, water and shelter. They include both physical and non-physical elements essential for human growth, development, expression, as well as all those things humans are innately driven to attain. Human needs theorists argue that one of the primary causes of protracted or intractable conflict is people's unyielding drive to meet their unmet needs on the individual, group and societal level. (Northrup, 1989) Given this condition, human needs become a powerful source of explanation of human behavior and social interaction. Social systems must therefore be responsive to individual desires on all levels.

2.3.1.1 Needs, Culture, Cities

Addressing basic human needs will enhance every individual's cultural well-being and expression. The presence of a diverse cultural element in the city will spark creativity and innovation. These cultural innovations, derived from different social groups, social classes, ethnicities and social densities, will enrich the experience of Pretoria as an urban environment, making both the city and its cultures, unique.

Healthcare was identified as one of the most urgent human needs in a local context of today. South Africa is burdened by one of the worst tuberculosis epidemics in the world, with disease rates more than double those observed in other developing countries and up to 60 times higher than those currently seen in the USA or Western Europe (Beresford, 8 September 2006). Fueling this condition is the deadly strain of Multi-Drug Resistant (MDR) TB and Extensively Drug Resistant (XDR) TB detected throughout the whole of South Africa. MDR TB is caused by the development of TB bacteria, which have become resistant to ordinary TB drugs. This occurs as a result of inadequate or irregular management of 'ordinary' TB, either by using inappropriate drug combinations or by using single drugs for 'ordinary' TB.

Other factors include clinics running out of drug stocks, inadequate counseling of patients leading to patients not taking their treatment correctly (poor treatment compliance) or patients not returning for treatment (defaulting treatment). Extensively Drug Resistant (XDR) TB results from failure to treat MDR properly and is effectively immune to all locally available drugs.

South Africa is one of the world's fastest growing tourist destinations (Pressly, 11 September 2006), home to millions of migrant labourers from neighbouring countries, and its ports and roads service several other African countries. Cumulatively, these factors make for a potentially explosive international health crisis. The threat to regional and global public health is thus clear.

(2.11)
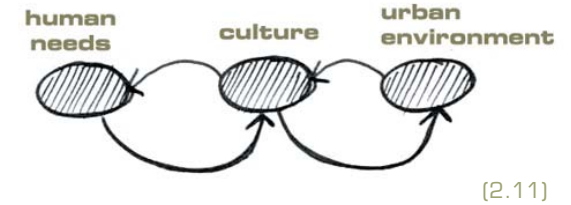
Figure (2.11):
The interdependance of human needs, culture and the urban environment

2.3.1.2 Directly Observed Treatment

Directly observed treatment is an important element in the World Health Organisation's recommended policy package for TB control. Directly observed treatment means that an observer watches the patient swallowing the tablets, in a way that is sensitive and supportive to the patient needs. This ensures that a TB patient takes the right drugs, in the right doses, at the right intervals. In practice, it means providing a treatment supporter acceptable to the patients, to enable them to complete treatment. The supporter may be a health care worker or a trained and supervised community member. Located next to a major transport interchange, the proposed intervention creates the perfect opportunity for this element of implementation.

2.3.1.3 The Client

The National Research and Development Strategy identifies the need to create 'centres and networks of excellence' in science and technology, including in the social sciences, as a key component of the human capital and transformation dimensions of government policy. The Department of Science and Technology (DST) is implementing the centers under the guidance of the National Research Foundation (NRF) of South Africa. One of the centres that will be developed is the DST Centre of Excellence in Biomedical TB Research (CBTBR). It is envisaged that such centres will stimulate sustained distinction in research while simultaneously generating highly qualified human resource capacity in order to impact meaningfully on key national and global areas of knowledge.

Internationally acclaimed TB research has been done at both the University of Stellenbosch (Division of Molecular Biology and Human Genetics) and the University of the Witwatersrand (Molecular Mycrobacteriology Research Unit) and by creating the CBTBR the two research laboratories will combine their efforts to successfully implement research within the community.

2.3.1.4 Implementation

Given this condition, it becomes clear that the primary need in terms of healthcare becomes the implementation of effective research within the general community, and not the research itself. The following diagram illustrates the areas in need of development and improvement. It also demonstrates the process of program generation:

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BASIC HUMAN NEED

Physical human need

HEALTHCARE

DST
Department of Science and Technology

NRF
The National Research Foundation

CHIEF CLIENT

"Centres of Excellence (CoE) are physical or virtual centres of research which concentrate existing capacity and resources to enable researchers to collaborate across disciplines and institutions, on long-term projects that are locally relevant and internationally competitive in order to enhance the pursuit of research excellence and capacity development."

TUBERCULOSIS

As a global problem
As a national health crisis

WITS
Molecular Mycrobacterialogy Research Unit

UNIVERSITY OF STELLENBOSCH
Division of Molecular Biology and human genetics

MRC
South African Medical Research Council

NHLS
National Health Laboratory Service

ADDITIONAL CLIENTS

CBTBR
Center of Excellence for Biomedical Tuberculosis (TB) Research

Client identified

TRANSFORMATION DIMENSION

CENTERS OF EXCELLENCE

AREAS OF DEVELOPMENT

UNIVERSITY OF STELLENBOSCH
Division of Molecular Biology and human genetics

WITS
Molecular Mycrobacterialogy Research Unit

RESEARCH

SERVICES

EDUCATION

WITS
...to build on a foundation to promote freedom of enquiry and the search for knowledge and truth, in a way that takes account of its responsibilities **within South Africa today**; and to maintain and enhance its position as a leading university in South Africa, in Africa, and in the world by sustaining globally competitive standards of excellence in **learning, teaching** and research...

"DOTS" Project
(Directly Observed Treatment)

ASPECTS

RESEARCH

IMPLEMENTATION

CLINICAL TRIALS

LOCAL GOVERNMENT

NUTRITION

GENERAL COMMUNITY

EMPOWERMENT

INFORMATIVE COMMUNITY

Research at this Centre includes all aspects of TB diagnosis, testing & treatment. This includes the molecular and clinical point of view as well as genomic and proteomic studies of the TB Bacillus and its interaction with humans

Information on research provided to Government

A principal determinant of mortality from tuberculosis is nutrition. Mortality from T.B. increases considerably as one passes from the economically prosperous to the poor districts of any area

UNIVERSITY OF STELLENBOSCH
...to create and sustain, in commitment to the academic ideal of excellent scholarly and scientific practice, an environment within which knowledge can be discovered, can be shared, and can **be applied to the benefit of the community...**

IMPLIMENTING NEEDS

To have an effect on the current TB situation in South Africa, research without implimentation is futile. An integrated, multidisciplinary approach is thus being adopted for the application of the studies being undertaken within the CBTBR, which involves a combination of 3 general areas of focus: Research, services and education

CLINICAL TESTING SITES

FOOD PROVISION

DIRECTLY OBSERVED TREATMENT

OCCUPATION & CONSULTING

KIWI IntellectuAll

(2.12)

SA Health Info

ADDITIONAL CLIENTS

FUNCTIONS

CLINICAL TESTING & MEDICINE

CAFETERIA AND FACILITIES

PATIENT MONITORING AND SUPPORT

LABOUR MARKET

FACILITIES

TESTING/CONSULTING ROOMS

WAITING AREA

X-RAY ROOMS

DISTRIBUTION LABORATORY

ADMINISTRATION

PHARMACY

ABLUTION FACILITIES

ADDRESSING SOCIAL ISSUES OF AREA

CUSTOMER AREA

KITCHENS

STORAGE

CLEANING

CONSULTING ROOMS

WAITING AREA

STORAGE - MEDICINE

TRADITIONAL HEALER

PSYCOLOGICAL CONSULTATION

CONSULTATION

OFFICES

SASPEN
South African Society for Parenteral and Enteral Nutrition

ADSA
Association for Dietetics in South Africa

NSSA
Nutrition Society of South Africa

ADDITIONAL CLIENTS

Figure (2.12):
The blocks in colour indicating the areas in need of development and implementation

2.3.2 The Physical Context As Program Generator

(2.13)

(2.14)

The site and surrounding area demands a certain program brief, generated from the basic accompanied needs experienced by people in transit, and from the rituals associated with transport interchanges. These rituals are manifested through the various activities that take place on a daily basis around the transport interchange. Throughout the process of transition the individual is being confronted with interchanges between journeys; as soon as a preliminary destination is reached, the journey ends and another begins. Through the ritual of transport, individuals will at times be stripped of their personal sphere into the public, forced to interact socially. The idea of the self being rooted in a social context and the suggestion of an interdependent self will be exposed. The design should instigate public interaction with the least amount of intervention.

The continuous efforts of urban planners and designers to idealise and promote communities are feeble attempts in enriching and creating culture. Bernard Tschumi (1994:13) believes that one should 'design conditions, rather that condition design'. The left-over spaces (voids), between the existing and the designed become public spaces to be appropriated by the user.

These 'voids' become the place of potential 'events'. Events being an 'indeterminate set of unexpected outcomes'. (ibid) Events are thus seen as the turning point; neither the beginning nor the end. Tschumi suggests that the future of architecture lies in such events.

The design should take temporary events as opposed to permanent functions, and merge them in architectural spaces. The physical needs and requirements of the site will be analysed in detail in the next chapter.

Figure (2.13) & (2.14):
Everyday activity on and around the site

2.3.3 The Feasible Context As Program Generator

Tschumi (1994:23) predicts that, due to the pressure of ever-rising land prices, the non-casual relationships between form and function – as well as space and action – programmes of the future will host various events. One such example is Melrose Arch in Johannesburg, where we find multiple programmes scattered throughout buildings: where office blocks contain health clubs, night clubs, shops and museums. Common or predicted programmes can generate uncommon or unpredictable events. This is also the case with the proposed intervention: it will be designed to accommodate different and evolving functions. Bearing in mind the cost of land near and around the CBD, the design will provide for rentable office space, and while the site simultaneously acts as a gateway into the city, the opportunity for advertisements, will be used.

(2.15)
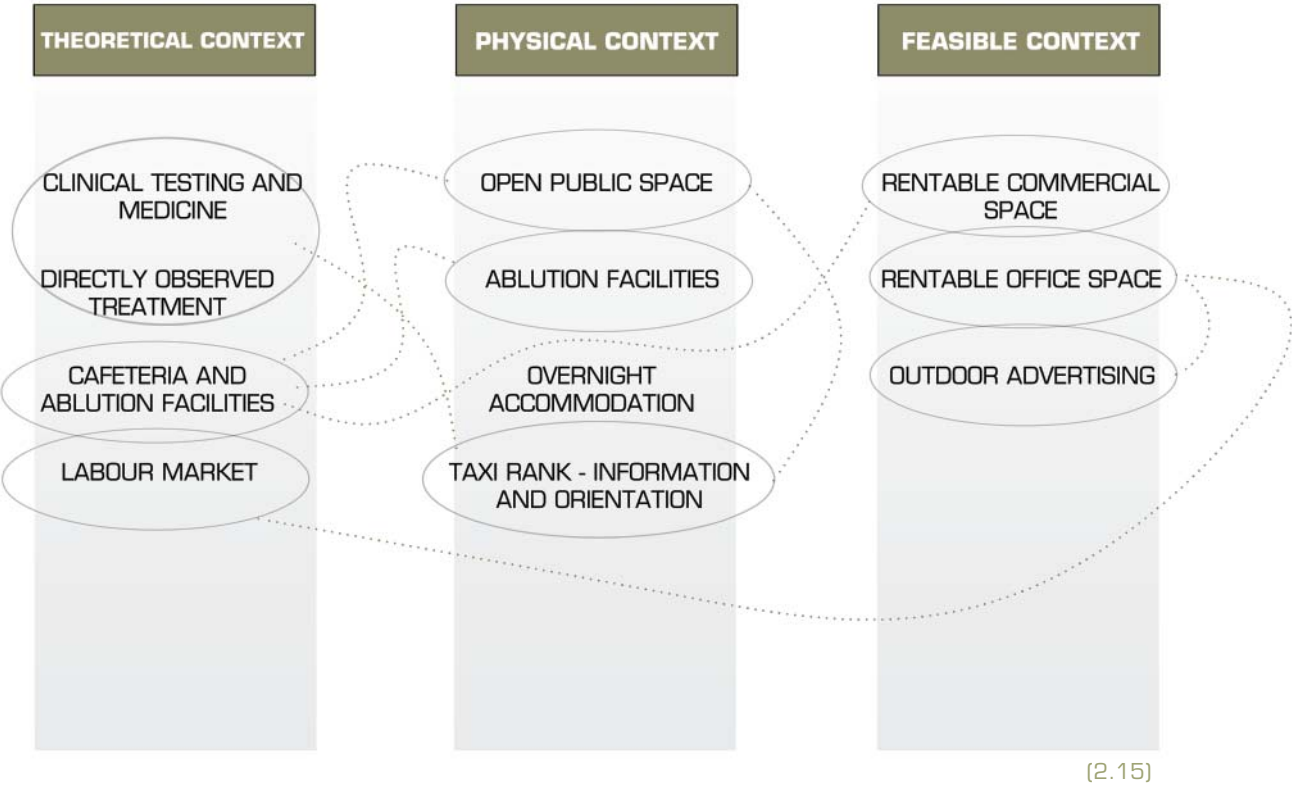
Figure (2.15):
Diagrammatic summary of the program, generated from the different contexts

3

TRANSLATE
Context analysis
Site analysis

translate *vb* to interpret or infer the significance of;
to transfer or convert

3.1.1.1 Topography

Pretoria, the capital city of South Africa, is located in the municipal area of Tshwane. It is situated in the transitional area between the Highveld and the Bushveld and is bounded by three prominent mountain ridges; the northernmost ridge is the Magaliesberg, further south the Witwaters Mountain range through which the Apies River flows, and lastly the Schurweberg which forms the southern boundary of Tshwane. The development of Pretoria's street layout stands in relation to the surrounding topography. The east-to-west orientated city blocks line up with the surrounding koppies, and the longitudinal shapes determine the city street character (Van der Waal, 1990).

Figure (3.1):
Map indicating the site in relation to Johannesburg and the City of Tshwane
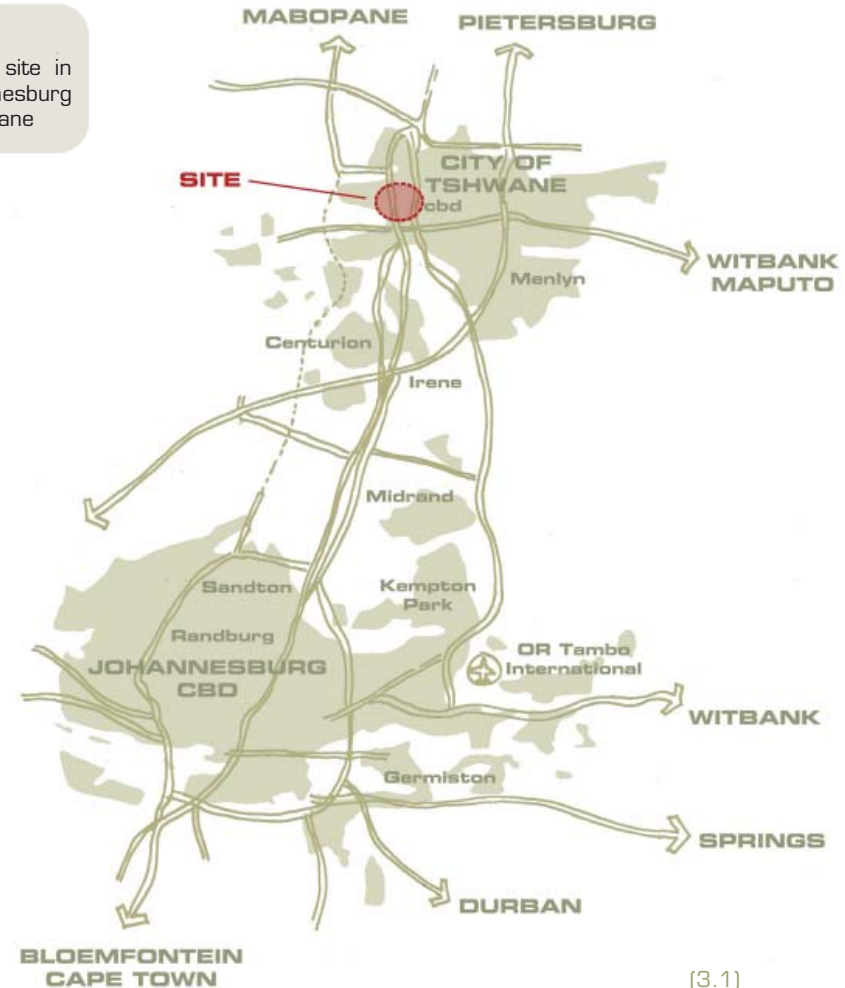
(3.1)

Figure (3.2):
Maps indicating the site from city scale to immediate context
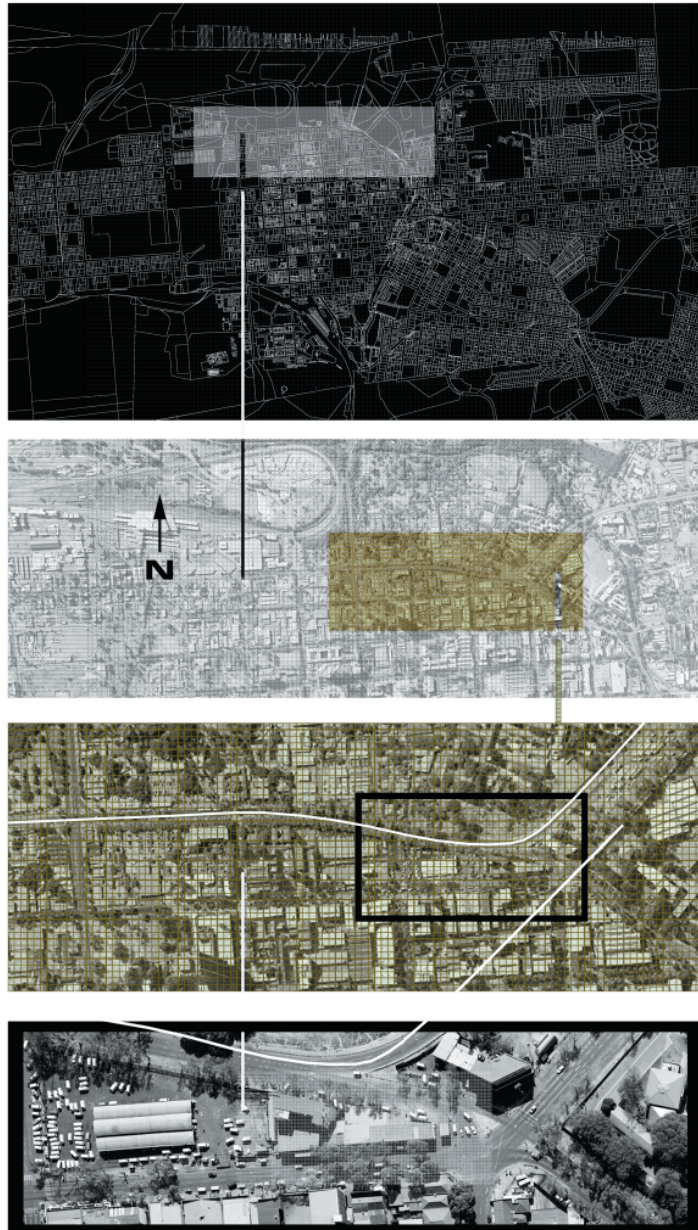
3.1.1.2 The City Past

Within the urban context of Pretoria, one deals with a city that was given life by an Apartheid Governments who wished to keep cheap black labor close to white cities, therefore given rise to periphery townships, which encompass most of our South African cities. These townships were designed specifically to discourage long-term settlement, and as a result, no provision was made for any form of economic generation. Informal settlements, or squatter camps, were on the other hand not government initiated, but by the inhabitants themselves, this form of informal developments occurred either because the townships were over-crowded, or workers coming from rural areas to work in the city, had no place to stay. The layout of Pretoria is thus typically that of an Apartheid city, fragmented due to an ideological racial segregation.

(3.2)

Until a late date in the 1980s, the growth of suburbs around the inner city was very closely and directly linked to the deepening segregation of South African cities (Mabin, 2007). But since then, suburbia has been the scene of residential desegregation – certainly more so than the townships, the other major component of South African urban residential space (ibid.). There may have been deepening of social rather than racial isolation as the suburbs have continued to boom in the post apartheid period. However, the development of the eastern suburbs has had a detrimental affect on the CBD of Pretoria.
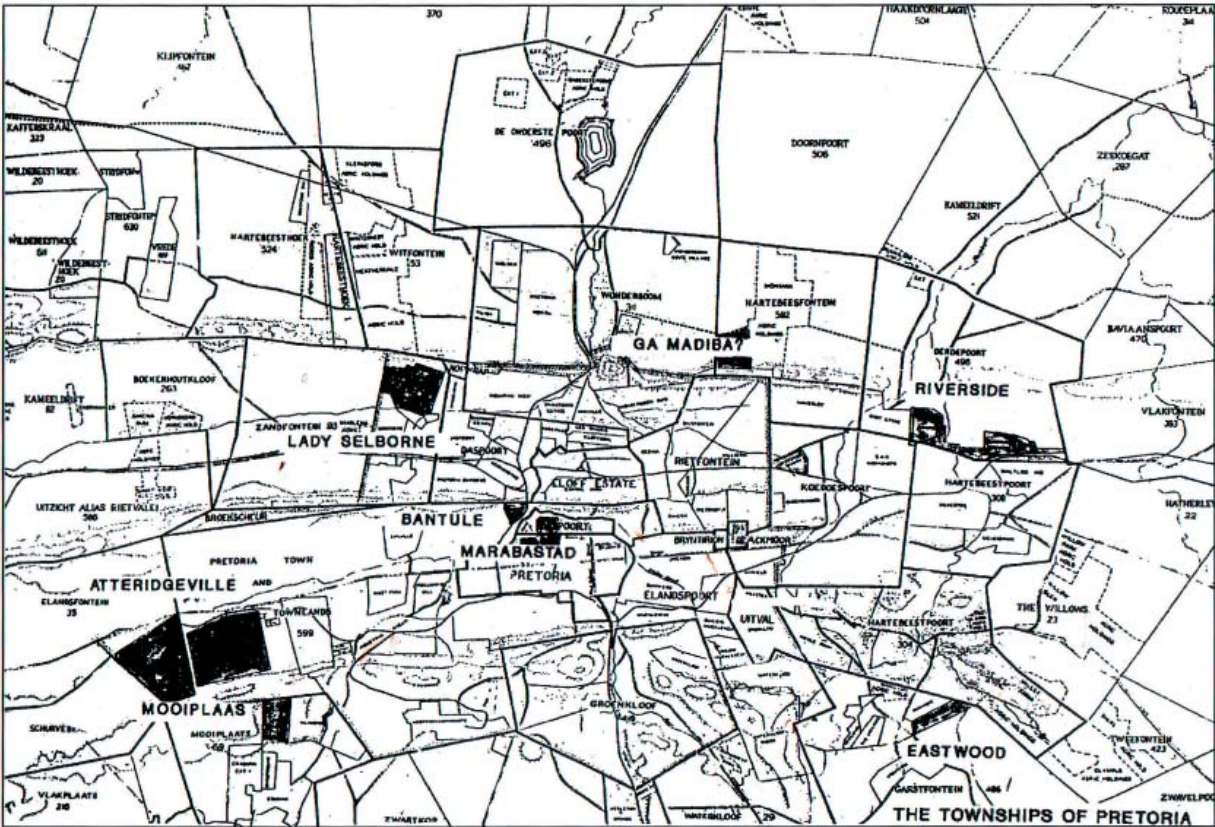
Figure (3.3):
Map indicating black townships around the CBD of the City of Tshwane - 1910

(3.3)

Figure (3.4):
Map indicating the position of site in relation to the northern and eastern suburbs of the City of Tshwane

(3.4)
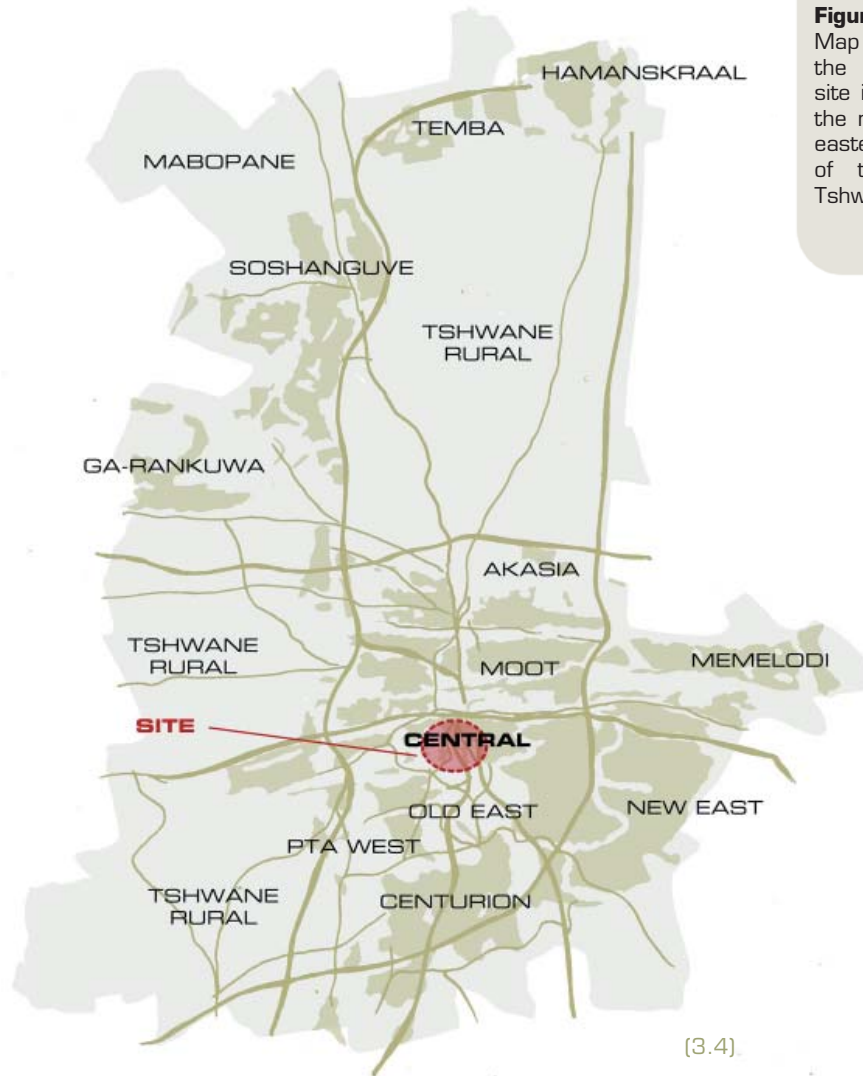
3.1.1.3 The City Present

Over the past thirteen years, South African urban policy makers have made concerted efforts to address the fractured nature of South African cities stemming from Apartheid planning. South African urbanism during the past decade in most respects reflects some of the most innovative policy and institutional narratives and exercises applied to cities anywhere. From integrated development planning to the selective deployment of infrastructure projects, interventions have considerably changed the urban landscape to highly fractured and discordant cities. However, it is striking how unchanged the futures of cities are today. More than a decade after political liberation, it is increasingly clear that current urban planning interventions themselves generate fracturing effects. Yet in significant ways, the 'apartheid city past' is as indicative of general urban futures as the repairs and innovations of the past decade.

3.1.2.1 Precinct Scale

The site lies on the north-eastern periphery of Pretoria Central, acting as one of the main gateways into the inner city. This area is bounded on the north by Boom Street, being the primary feeder of traffic into and around the inner city. Nelson Mandela Drive defines the eastern boundary of the precinct, while D.F. Malan Drive forms the western boundary. The south of the precinct area is confronted with the CBD.

PRECINCT AREA

Figure (3.5):
Map indicating the precinct area in relation to the City of Tswhane

(3.5)

STUDY AREA

SITE

(3.6)

WIDER CONTEXT

IMMEDIATE CONTEXT
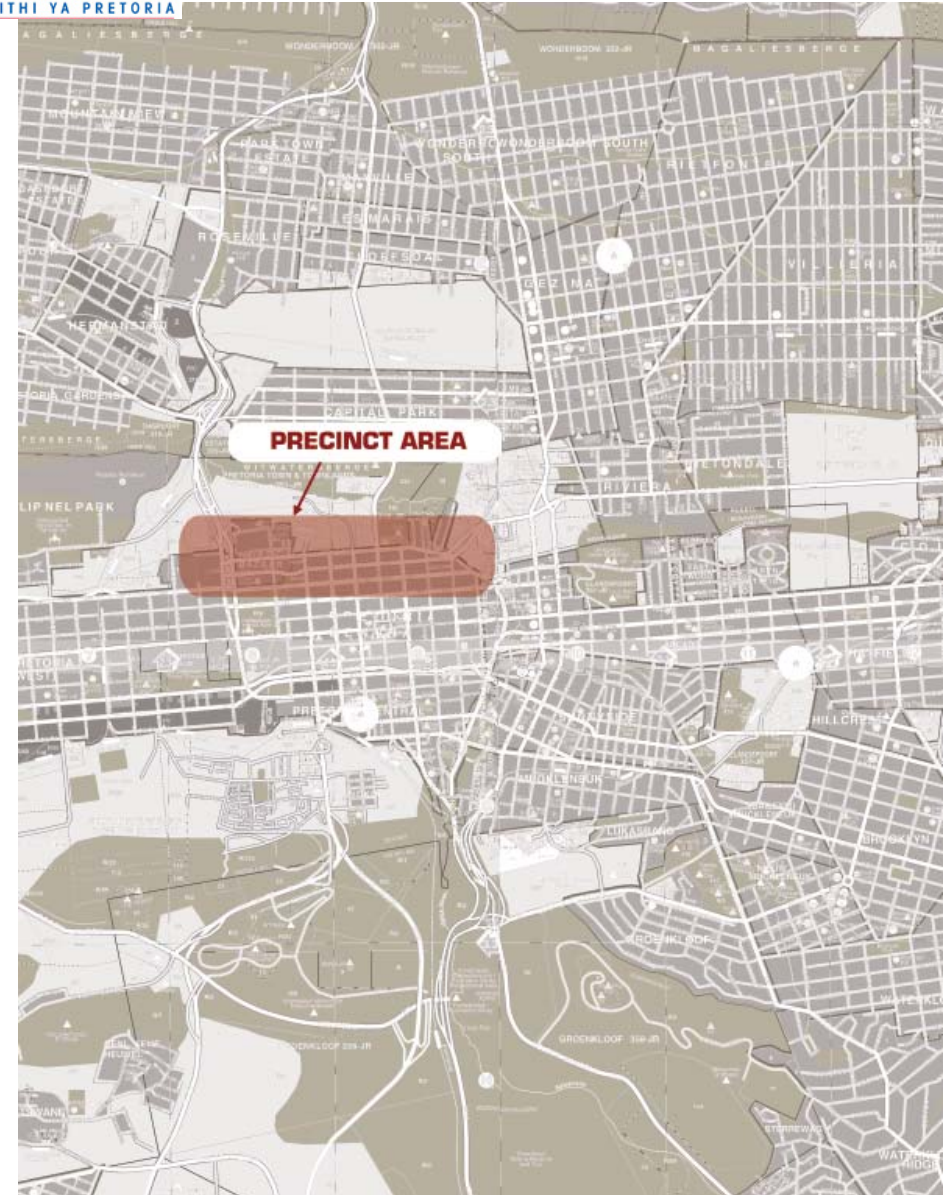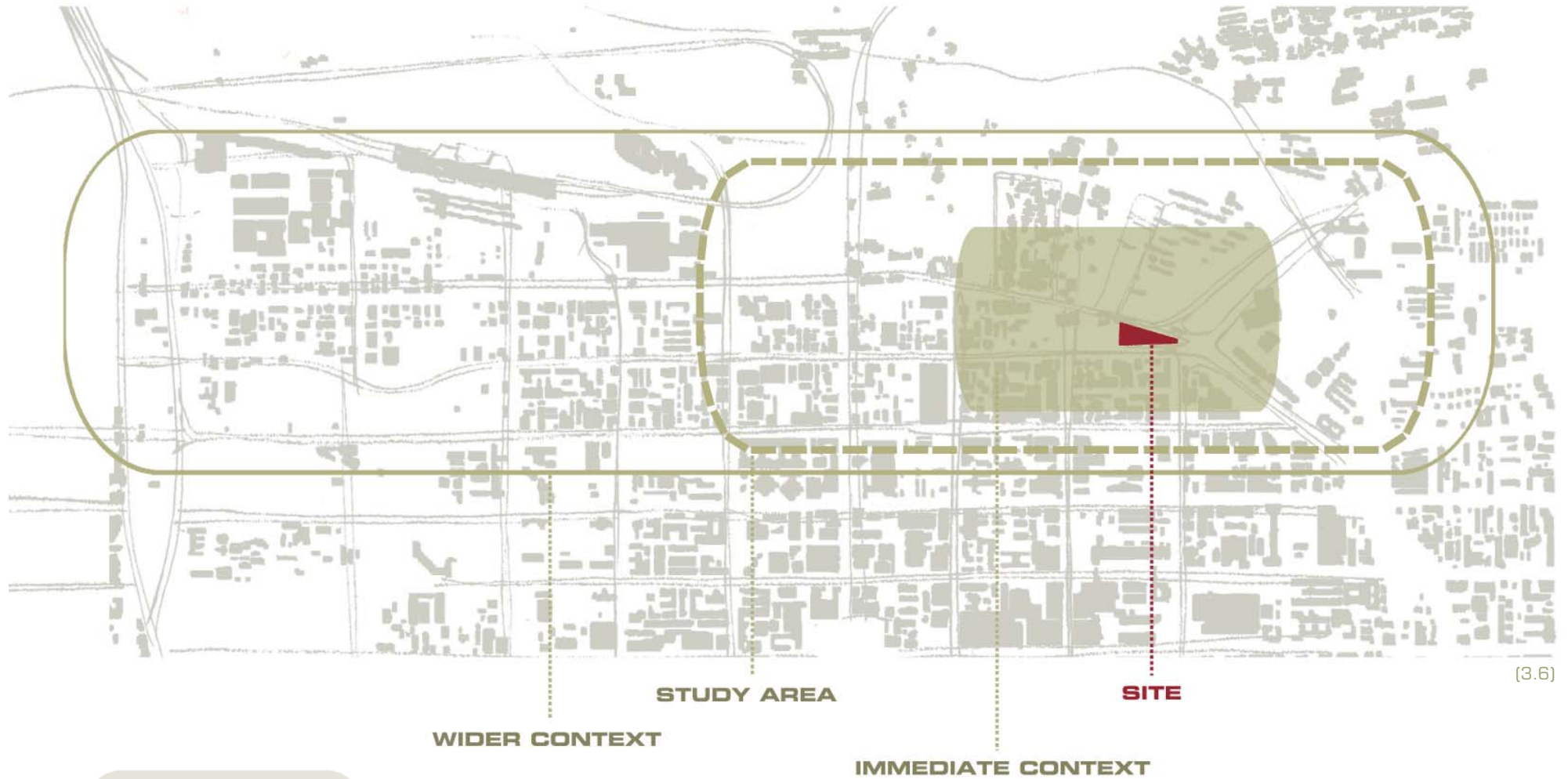
Figure (3.6):
Precinct scale: Site as part of the Tshwane Inner City Development and Regeneration Strategy

3.1.2.2 The Framework

The Tshwane Inner City Development and Regeneration Strategy is a macro scale urban development framework with the intended aim of achieving sustainable urban renewal. The framework is accepted as a given. The author did a revision of the framework, incorporating the selected site within the proposed development.

The interventions into the spatial and physical environment of the inner city, is based on eight building blocks, namely:

- Announcing the destination
- Cultural Circle
- Capital Precinct
- MDC and Apies River Promenade
- Tshwane Crossing
- Zone of Urban Regeneration
- Movement
- Exceptional public Environment

- ### Announcing the Destination

The significance of the inner city as destination must be announced in bold terms by defining the gateways into the capital area of Pretoria. Furthermore, the entrance into the built environment should be enhanced by creating appropriate landmarks. The proposed site provides an excellent opportunity for such a landmark. By entering the city from the north-east via Dr. Savage Rd, this site and surroundings not only become the first buildings to be confronted with, but it also become the earliest integrated, vibrant, high-intensity, mixed-use and pedestrian environment, linked to one of the main transport facilities within the central business district of Pretoria.

Although most of the gateways into the city could be enhanced by creating landmarks or symbols, the proposed site lends itself to a unique situation: It becomes a destination itself, and not only the announcement of that what might follows. The built form provides an indication that the intensity of development is increasing and changes from low density residential to a definite business environment.

It is therefore proposed that this entrance to the inner city be defined by a landmark or capital symbol celebrating the arrival of the inner city and presenting its character and identity, without compromising the activity that already nourish its users.

[3.7]

Figure (3.7):
The site as one of the main gateways into the city

MAJOR NODES

PEDESTRIAN
ROUTES

AXIS OF
EXPRESSION

LESS FORMAL
CULTURAL

(3.8)

Figure (3.8):
The site as part of the pro-
posed cultural circle

- Cultural Circle

In keeping with the vision that Tshwane and its inner city be developed as the Capital of Culture in Africa, the main structuring component for the future physical development of the inner city is the proposed Cultural Circle.

This concept is based on the identification of all existing cultural landmarks and facilities and the enhancement thereof, as well as the development of new, contemporary cultural landmarks and the linking of these through a system of mono-rail transport and pedestrian routes.

The diagram illustrates the most important cultural nodes and places of interests within the CBD of Pretoria. It further shows the proposed connecting pedestrian routes and mono-rails. Although the site lies within an area with minimal cultural assets, it forms part of the main pedestrian routes connecting the major nodes in and on the periphery of the inner city.

- Defining the Capital Precinct

The function of the Capital City with regard to the concentration of government headquarters and its ceremonial and celebratory role are most appropriately placed within the inner city as the functional and symbolic heart of the Capital City. The Capital Precinct is defined as the area that will comprise the largest concentration of the Capital City elements.

The Capital Precinct is defined by a road grid that frames the inner city and creates a system of welcoming boulevards. It is proposed to create capital junctions within this system of welcoming boulevards at major crossings. These welcoming boulevards also link important strategic locations that should accommodate landmark developments and capital symbols or landmarks. The convergence of streets at the Boom Street and Bloed Street interchange forms part of the framing grid and has the potential to become an important capital junction.

FRAMING GRID

GOV. CLUSTERS PEOPLE'S SQUARES

AXIS OF EXPRESSION

CAPITAL JUNCTIONS

CAPITAL ANCHORS

(3.9)
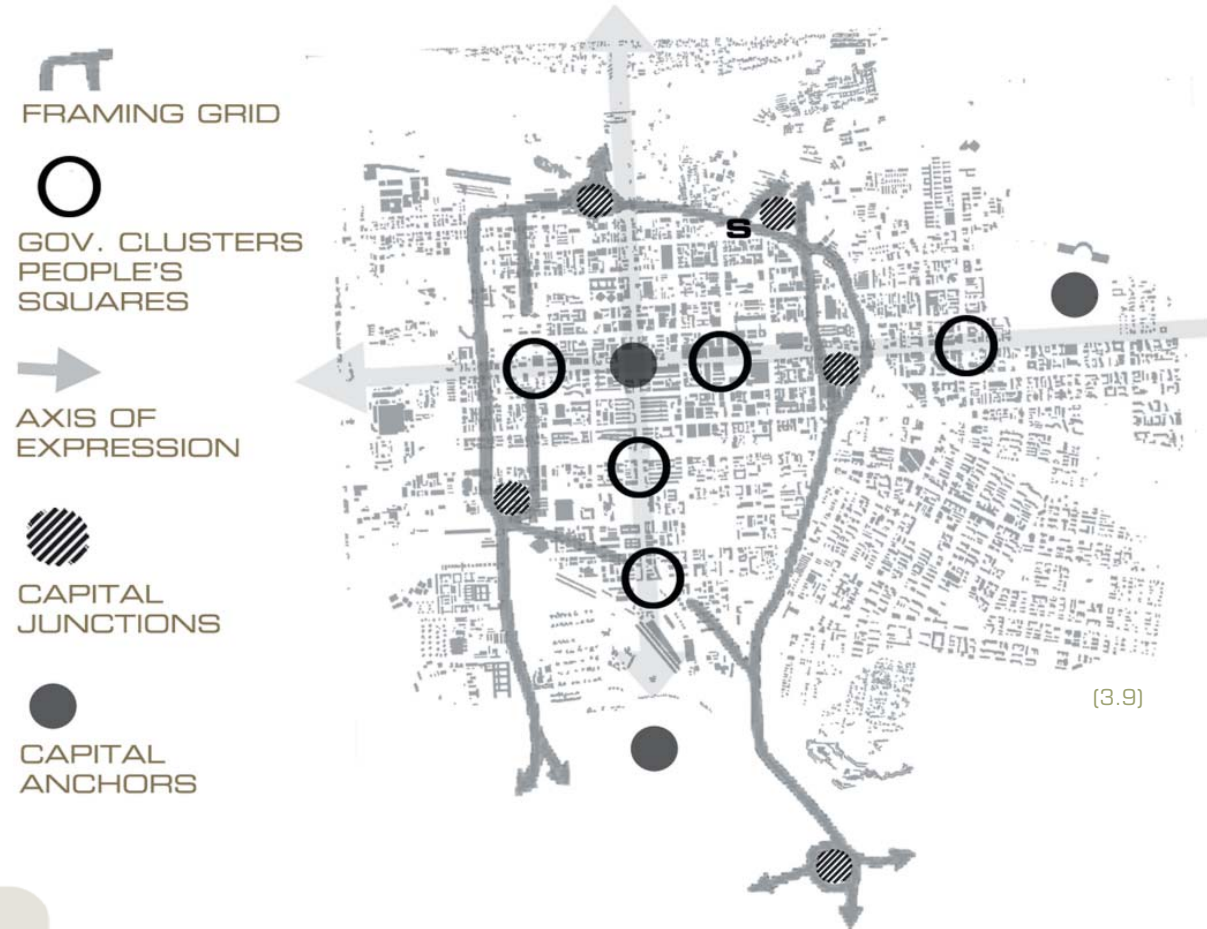
Figure (3.9):
Defining the capital precinct

FUTURE LINK

WATER PROMENADE

RECREATION, TOURISM

CAPITAL NODES

APIES RIVER

NEW INTERCHANGE BEN SCHOEMAN

(3.10)
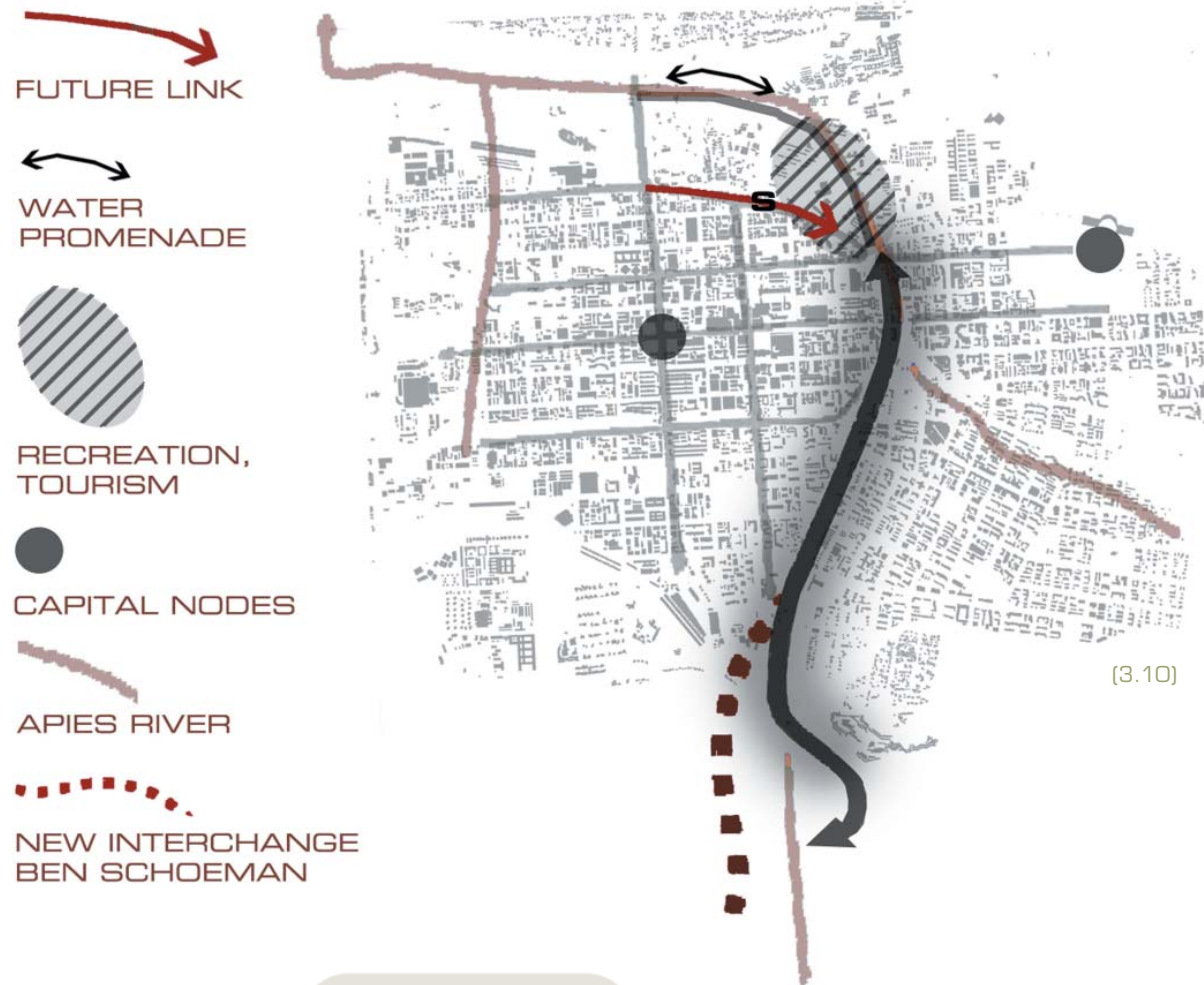
Figure (3.10):
The site functioning as a gateway into the proposed Corridor

• Nelson Mandela Corridor and the Apies River Promenade

The Mandela Development Corridor is situated alongside Nelson Mandela Drive on the eastern edge of the Inner City. This corridor is a future focal area for the arts, culture, government, business, sports, entertainment and, commercial development. Nelson Mandela Drive has been upgraded to a dual carriageway and is the new main entrance to Pretoria. The Corridor allows prime exposure on Nelson Mandela Drive.

The open space system along the Apies Rivers can cater for the active recreational needs of residents and employees by providing facilities for walking, cycling and playing. Crossing over the Apies River should be identified through the use of specific design elements.

The land to the north of the proposed Tshwane crossing along the Apies River should be redeveloped for recreational- and entertainment purposes for residents and tourists in an environment that optimizes, compliment and enhances this important natural element. The Zoological Gardens is linked along the Apies River spine. This link could include a system of river boats on the Apies River.

The site, however not part of the initial proposal, functions as a gateway into the Corridor, and might therefore be considered as an extended section of the development at a later stage.

- Tshwane Crossing

The meeting place of the Apies River, the Walker Spruit, Nelson Mandela Drive and Church Street has been identified as a strategic location for a landmark catalytic development for the Inner City and for Tshwane itself.

With this in mind, one sees that the site again becomes one of the entrance roads to this development from the north, thus, feeding the Tshwane Crossing directly from all areas at the northern sphere of Pretoria, without rerouting them via the city center.

TSHWANE CROSSING

NELSON MANDELA CORRIDOR

FUTURE LINK

CAPITAL NODES

MAJOR FOCAL NODE
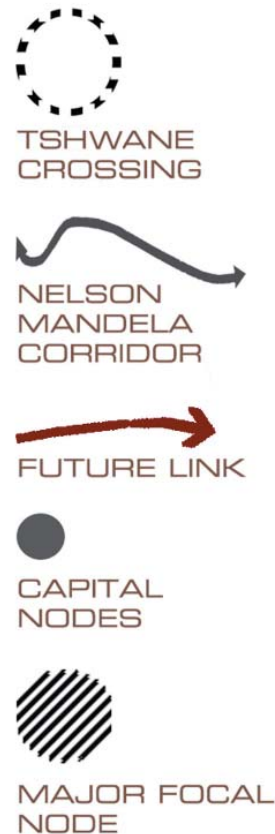
(3.11)

Figure (3.11):
The site in relation to the proposed Tshwane crossing

- ### Zone of Urban Regeneration

The northern, western and north-western (Marabastad) parts of the inner city are highly neglected areas that are in desperate need of urban regeneration. This area is ideally suited for the creation of a true integrated urban residential environment on the edge of the business district (the more central part of the inner city).

The area is within walking distance of the majority of employment opportunities in the inner city, and is also within walking distance of public transport facilities such as Belle Hombre Station and the Bloed Street Taxi Rank. This area comprises large tracts of derelict land or land underutilized, mostly State or Council owned that can be used to create a Zone of Urban Regeneration. The Zone of Urban Regeneration will comprise specific components, namely the Tshwane Park, Residential Development, Infill Business and Social Facilities, Marabastad Urban Village and Creative Industries.

Tshwane Park: It is proposed to create a significant open space area on this land focused along the Steenhovenspruit. This park can comprise hard and soft open spaces, recreation and sport facilities, restaurants and other leisure activities.

Residential Development: The area around the Tshwane Park should be developed as a high intensity urban residential area, comprising of different housing typologies and different price ranges in order to ensure a socially integrated environment. The transformation of this area into a fine grained urban residential area is appropriate from a historic point of view, as most of this area, specifically Marabastad, was traditionally a vibrant mixed-use residential area on the edge of the Inner City, until people were removed.

Infill Business and Social Facilities: The areas in between the residential developments should be developed for fine-grained urban environments comprising businesses, social facilities and entertainment activities that are aimed primarily at the residential population as well as tourists and visitors to the park. A strong emphasis should be placed on the development of employment opportunities that are geared towards the tourism market.

Marabastad Urban Village: Except for residential development, Marabastad is also considered ideal for the creation of an urban cultural precinct, comprising crafts, arts, entertainment etc. If correctly developed and managed in this manner and with a strong authentic historical foundation, this area can become a prime tourism destination in Tshwane.

Creative Industries: The area in front of the Pretoria Zoo is a seriously neglected area that detracts from this world renowned attraction. It is proposed that this area be redeveloper to provide attractive small business opportunities for creative industries that will contribute to the creation of a tourism hub around the Zoo.

The above-mentioned development is seen as a major intervention in the western part of the inner city, but also for the proposed site, as it will become part of the route towards and from this intervention. It will drastically alter the character and perceptions associated with this part of the city, and allow for the creation of vibrant urban areas that are focused on people and their needs.

MARABASTAD URBAN VILLAGE

RESIDENTIAL ZONE

URBAN PARK

BUSINESS DEVELOPMENT

CREATIVE INDUSTRIES

LINK WITH SITE

(3.12)

Figure (3.12):
The site shown as influential to the zone of urban regeneration

FIXED MONO-RAIL
CONNECTING
MAJOR NODES

SITE CONNECTION
WITH MAIN
TRANSPORT
FACILITIES

(3.13)

Figure (3.13):
Movement around the CBD
of the City of Tshwane

-       Movement and Accessibility

The linking of strategic places is an important element of the Strategic Development Framework. These linkages are functional but also contribute to the experience of the inner city as a destination. The role of public transport in this regard is critical and requires significant interventions and the establishment of a management framework. The aim is to make movement within the Inner City as convenient as possible for all modes of transport (private vehicles, public transport, pedestrians and cyclists), and to ensure that all the major elements, districts and tourist destinations are effectively linked.

The site lies between two major taxi ranks, namely the Bloed Street Taxi Rank and the regional taxi rank between Dr. Savage Drive and Soutpanberg Drive. Bloed Street is also being fed from the Belle Ombre Station at the west of the Inner City periphery. It therefore becomes the perfect node of linkage between the different strategic locations.

- Exceptional Public Environment

The foundation of a unique and exciting inner city that is able to attract high quality development is an exceptional public environment that can compete with all the best cities in the world.

The public environment consists of the following elements:

- Public Spaces and Streetscape
- Architectural Quality of Buildings
- Urban Forestry
- Natural Environment

The Tshwane inner city should comprise sufficient public spaces which must be of exceptional quality. These spaces must also function properly for the purpose for which they are intended.

3.1.2.3 Influences on the Wider Context

The northern suburbs have a greater impact on the wider context of the site, due to the higher population densities and a greater amount of commuters traveling towards the CBD.

(3.14)
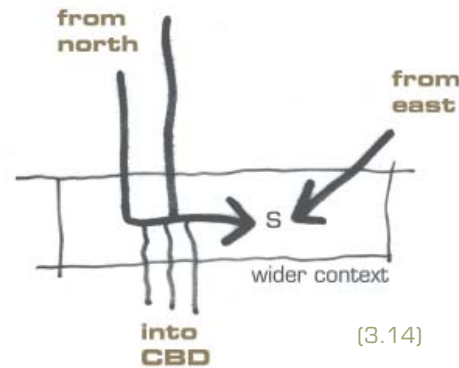
Figure (3:14): Influence from the north and east on the site

Figure (3.15): Population densities in the City of Tshwane

Population Density in the City of Tshwane

	0 - 25 000
	25 001 - 75 000
	75 001 - 125 000
	125 001 - 200 000
	200 001 - 1 000000

1 - North west periphery
2 - Soshanguve
3 - GaRankuwa
4 - Akasia
5 - Temba
6 - Rooiwal
7 - Wonderboon
8 - Pretoria farms
9 - Attridgeville
10 - Moot
11 - Eastern corridor
12 - CBD and central regio
13 - South-west rural
14 - Centurion WEst
15 - Lytleton
16 - Old east
17 - New east
18 - Irene

(3.15)

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Figure (3.16):
Most important institutional and cultural installations within the wider context of the site

SITE

STUDY AREA

(3.16)

center of medical facilities

gateway into the city from the northern suburbs

nearest station to site

Medical center

tourist attraction

Belle Ombre Station

Zoo

SITE

DF Malan

Apies river

marabastad

work force from Marabastad

CDB

Apies River Promenade

Nelson Mandela Drive

influence from the CBD

exstention from the proposed Corridor

(3.17)

MEDICAL FACILITIES TO THE NORTH

TRAM STATION

BLOED STREET TAXI RANK

SITE

UNDEFINED ARCADES

SITE SCALE: LOCATION OF ASSUMPTIONS

(3.18)

(previous page) Figure (3.17):
Influence of the wider context on the study area
Figure (3.18):
Site scale: Assumptions within the study area

The study area is bounded on the west by Bosman Street, and   the periphery of the Technicon of Pretoria's Art department defines the eastern boundarya. Struben Street defines the southern boundary of the study area, while the Pretoria Zoological Gardens and Prinshof School, forms the northern boundary.

Assumptions within the study area include:

- The proposed tram system will be implemented

- The Boom Street Taxi Retail Park will be built at the current taxi stop in Bloed Street

- An arcade system will be implemented within the Inner City, connecting various public spaces

- The urban environment surrounding the proposed site, will maintain its unique identity

- The series of medical facilities situated on the north-eastern periphery of the inner city, will remain within this area

Our physical urban environment is shaped by the social and economic conditions and aspirations of the people who inhabit it. Inversely the quality of the physical environment has an impact on the quality of life, and the socio-economic conditions within the area. This reciprocal relationship between human activity and the physical environment is manifested in the change which takes place in and around our cities on an ongoing basis. (figure 3.19)

Access to social infrastructure is an important element of the context in which people live and attempt to gain access to education, training and jobs. Those who live within easy access to health, transport and education facilities will find it easier to make use of services important for their health and development, and to seek economic opportunities.

In the instance of the study area and site these dynamics have over the past years taken the form of a downward spiral, where the dynamic interaction of physical and social conditions, with the added impact of external political influences, have led to the current slum-like conditions.

The physical manifestations of the problem are uncontrolled hawking in miserable conditions, a breakdown of services, neglect of buildings, an unsafe, crime-ridden life on the streets, illegal dumping, accumulation of waste and a generally unsightly and unhealthy environment.

Changes to the outward appearance and urban fabric can only be effective if development plans also consider possible solutions to the social and economic problems affecting the area.

Both equally important and interdependant

city ⇄ user

(3.19)

According to the City of Tshwane Integrated Development plan:

- The study area is indicated as 'urban' with land uses varying from special residential to general business.

- The Apies River flood area and river bed is reserved for open space and conservation

- The precinct area is reserved for business, government, parking garages, parking sites, places of instruction, and places of public worship, places of refreshment, residential buildings, restricted industries, retail industries, shops, social halls, and vehicle sales mart.

Figure (3.19):
Sketch showing the interdependance between city and user

USE ZONE: Existing public open space

USE ZONE: Special
LAND USE / USES PERMITTED:
Special Residential, Offices (excluding medical and legal professions) and such store-rooms as are supplementary and subservient to the main office use)
HEIGHT: 1 Storey
COVERAGE: 50%
FAR: 0.5
PARKING REQUIREMENTS: Offices: 4 parking spaces per 100m² gross floor area.
Store-rooms: 1 parking space per 100m² gross floor area.
Should be permanent dust-free, paved, drained surface to the satisfaction of the Municipality.

USE ZONE: Special residential
LAND USE / USES PERMITTED: One Dwelling-house
USES WITH CONSENT: Commune, Creches 13-19 children, Institutions, Parking garages, Parking sites adjacent to Zones VII and VIII. Places of instruction, Places of public worship, Social halls, Special buildings, Sports grounds, Toddlers' workshop, One additional dwelling house.
DENSITY: 500m² per erf
HEIGHT: 3 Storeys
COVERAGE: 50%
BUILDING LINES:
Single storey: sides – 2.25m, rear – 3m.
Double storey: sides – 3.75m, rear – 4.5m.
Street boundary: 3.5m

USE ZONE: Special
LAND USE / USES PERMITTED:
Solely for a dairy factory and/or for purposes incidental thereto and/or storage and distribution and sale of dairy-products.
OR with written consent, housing.
HEIGHT: 2 Storeys
COVERAGE: 80%
FAR: 0.75
PARING REQUIREMENTS: 1 paved parking : 5 employees. 3 parking spaces for visitors and clients.

USE ZONE: Special residential
LAND USE / USES PERMITTED: One Dwelling-house
USES WITH CONSENT: Commune, Creches 13-19 children, Institutions, Parking garages, Parking sites adjacent to Zones VII and VIII. Places of instruction, Places of public worship, Social halls, Special buildings, Sports grounds, Toddlers' workshop, One additional dwelling house.
DENSITY: 500m² per erf
HEIGHT: 3 Storeys
COVERAGE: 50%
BUILDING LINES:
Single storey: sides – 1.75m, rear – 2.25m.
Double storey: sides – 3.0m, rear – 3.75m.
Street boundary: 3.5m

(3.20)

USE ZONE: General Business
LAND USE / USES PERMITTED: Business, Government, Parking garages, Parking sites, Places of instruction, Places of public worship, Places of refreshment, Residential buildings, Restricted industries, Retail Industries, Shops, Social halls, Vehicle sales marts.
USES WITH CONSENT: Dwelling houses, Filling stations, Institutions, Motor workshops, Places of amusement, Public garages, Restricted industries, Special buildings, Sports grounds, Warehouses.
USES NOT PERMITTED: Panel-beating and spray-painting, other uses not above.
DENSITY: N/A
COVERAGE: Zone 4: 60%
HEIGHT: Zone 5: 19m
FLOOR SPACE RATIO: Zone 4: 2.5
BUILDING LINES: Sides: Null. Street: 3.5

USE ZONE: General Business
LAND USE / USES PERMITTED: Business, Government, Parking garages, Parking sites, Places of instruction, Places of public worship, Places of refreshment, Residential buildings, Restricted industries, Retail Industries, Shops, Social halls, Vehicle sales marts.
USES WITH CONSENT: Dwelling houses, Filling stations, Institutions, Motor workshops, Places of amusement, Public garages, Restricted industries, Special buildings, Sports grounds, Warehouses.
USES NOT PERMITTED: Panel-beating and spray-painting, other uses not above.
DENSITY: N/A
COVERAGE: In accordance with the approved SDP.
HEIGHT: 15m
FLOOR SPACE RATIO: 1:1
BUILDING LINES: In accordance with the approved SDP.

Figure (3.20):
Land uses and zoning within the study area

3.4.1 History of the Immediate Context of the Site

Pretoria can be considered as a relatively young city, established only in 1855. The development of the early establishment, was not forced upon the river and its location, but rather defined by it, for water was provided to the city from fountains via water furrows. The Pretoria community, due to its political footing and the knowledge of what a contemporary city should look like, was established above the river around Church Square on a grid defined by openings within the Daspoort and Schurweberg ridges (Fisher, Le Roux, Maré 1998:61).

During the time when Pretoria was established, the land within the study area was part of a property called Prinshof, named after Joggem 'Tweeduim' Prinshof (Van der Waal 1990:28). In the early 20th century the area served as the Prinshof experimental station where the cultivation of different types of grass species took place (ibid) Property on the west bank was owned by Theodore Hove (1834 – 1906). A linocut work by Hendrik Pierneef show what the area looked like in 1925.

Hove's drift provided access across the Apies River from central Pretoria to the north and in 1932 a bridge was built here by Bain & Proudfoot. In 1935 Dr. Savage Street was built across the bridge. The road was named after Dr. SR Savage who was major of Pretoria from 1907 – 1908 (Heydenrych & Swiegers 1999: 38).

(3.21)

Figure (3.21):
'Uniegebou Vanaf Prinshof , Pretoria 1925' by Hendrik Potgieter
Figure (3.22) & (3.23):
Driving from Boom Street towards Dr. Savage road

(3.22)

(3.23)

3.4.2 Heritage Impact Assessment

The following diagram illustrates the most important historical buildings within the study area. The heritage impact assessment in the appendix gives a complete description of each building.

Historical importance

- HIGH
- MEDIUM
- LOW

Prinshof School

plant cultivation

zoo entrance

dump

SITE

Taxi Rank

(3.24)

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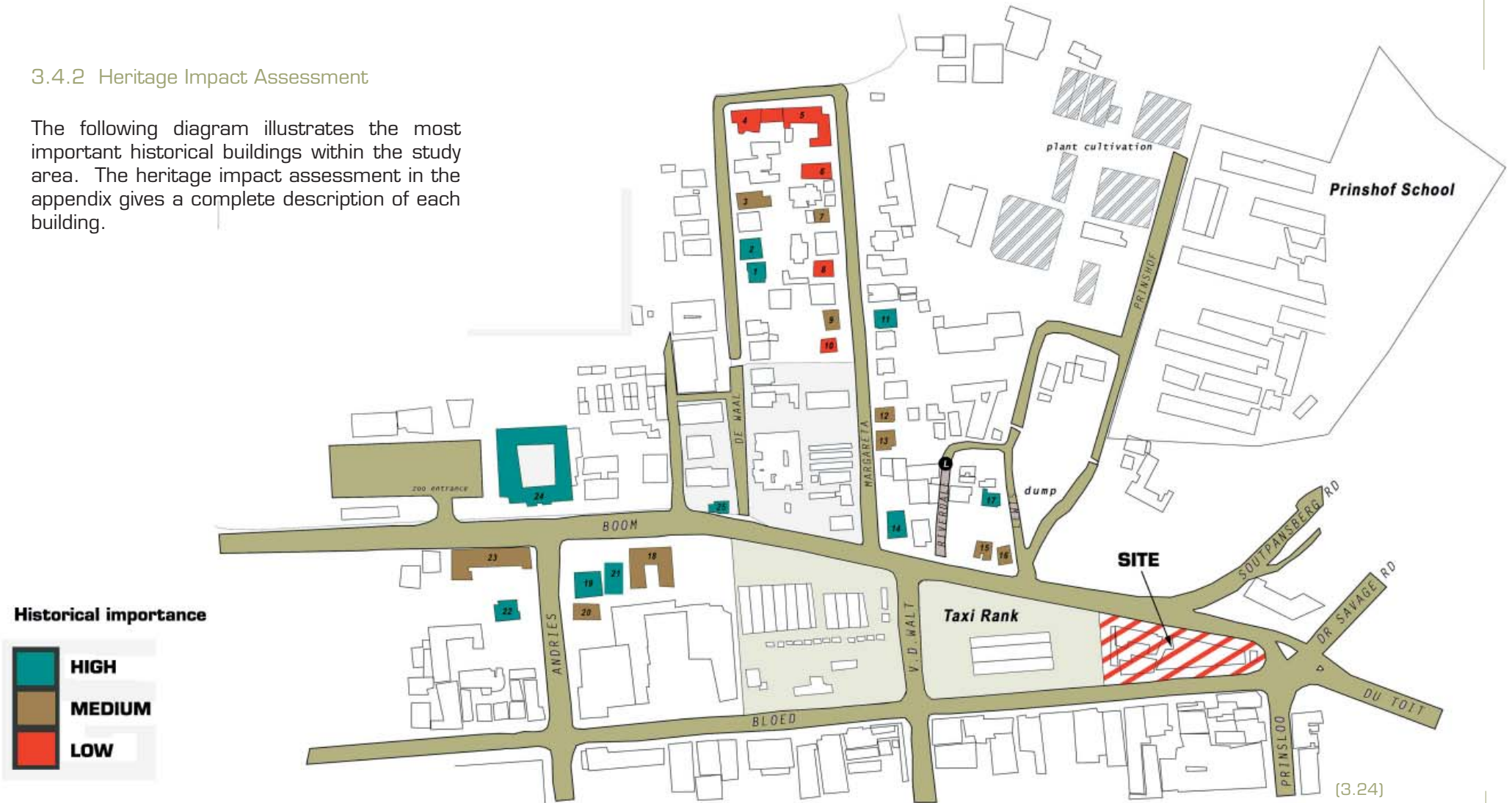
3.5.1 Scope of the Analysis

The site is located at the convergence of four major roads, creating a unique transportation and pedestrian junction. The north-eastern side of the site is bound by Boom Street, while Bloed Street forms the southern boundary. Both of the above mentioned are one-way streets respectively running in an eastern and western direction. Boom Street diverges north-east into Soutpansberg Rd, while one enters the junction from this same direction via Dr. Savage Rd. Boom Street, in the southern direction, further diverges into Prinsloo Street, while the south-eastern divergence later extends into Nelson Mandela Drive. The western side of the site is bordered by the future-proposed Bloed Street Taxi Retail Park.

Due to the nature of the brief, the immediate site will be analysed on two levels:

1 Existing demands of the site
2 Future proposals and development

(3.25)

Figure (3.25):
Arial view of the site and intersection

Dr Savage Rd

Intersection

Site

Existing adjacent building

Existing taxi rank

(3.26)

Figure (3.26):
North-eastern view towards
the site

Du Toit Street

Prinsloo Street

Intersection

Existing
opposite building

Site

Existing taxi rank

Opposite open site

(3.27)

Figure (3.27):
East-south view towards the
intersection and the site

Prinsloo Street

Existing taxi rank

Boom Street

Bloed Street

Site

Opposite open site

(3.28)
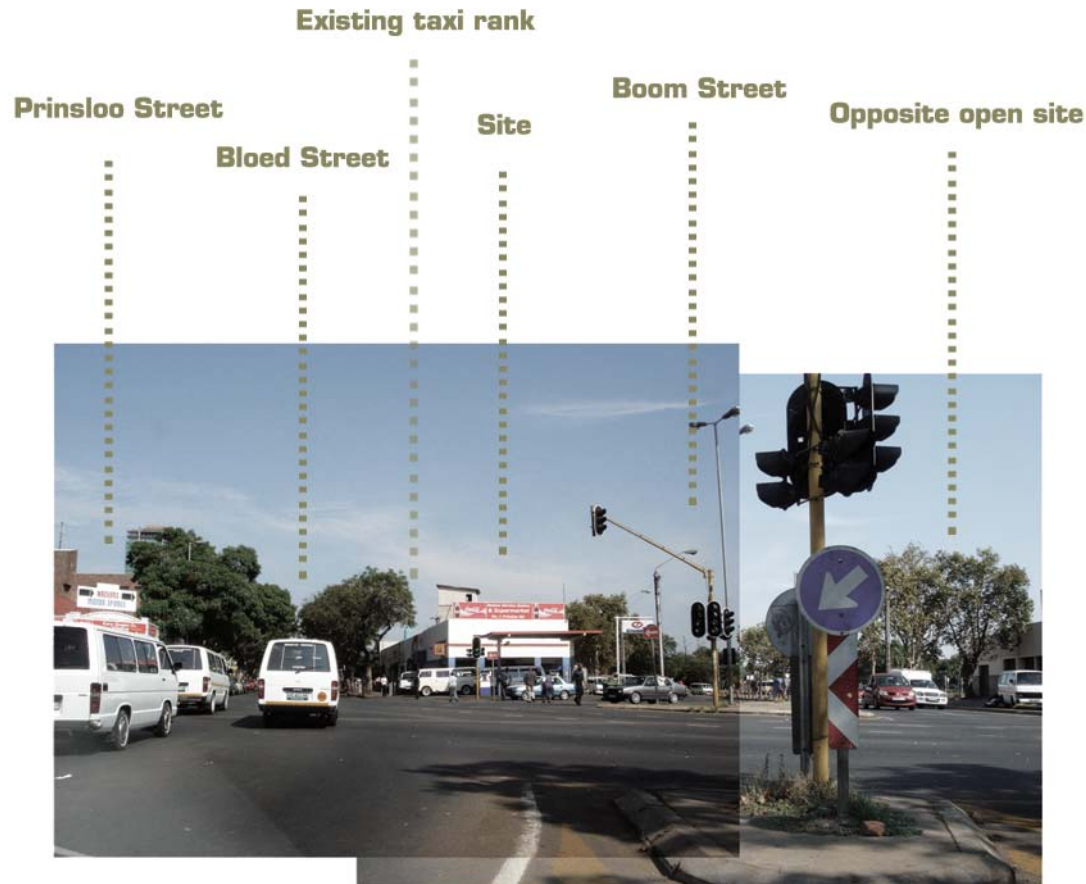
Figure (3.28):
Eastern view towards the intersection and the site

3.5.2 Site Elements

The site requires a variety of responses generated from the main site elements and aspects. These will be divided into four categories:

a   Street character
b   Roads
c   Circulation
d   Adjacent buildings

a Street Character

In an urban setting, the location, form, materials, and other architectural features of buildings largely determine the character of the street and, in turn, affect the character of other design elements that reinforce this authentic urban character. These are the elements that compose the public realm. These elements significantly contribute to the livability of the city. The use and placement of these elements are determined by what type of street character is being sought.

Street character present: The character of a street is established and maintained by many factors beyond the dimensions imposed by vehicular traffic. Land use alone typically creates a critical context. Even if the adjacent land use is identical, local building codes could create streets with very different characters. Two streets with the same dimensions and the same land uses but laid out in accordance with very different building codes – one suburban and one urban – may have widely different characters.

Boom Street: As indicated in figure 3.20 and figure 3.31, the zoning and land uses around the site, varies between that of general business and special residential. The residential area to the north of the site is in fact one of the oldest residential areas within the city, with houses and buildings exceeding 60 years in age. The street character of Boom Street can therefore be classified as both urban and sub-urban.

Figure (3.29):
Section through Boom Street illustrating existing street character

Figure (3.30):
Section illustrating future character of Boom Street after the proposed Taxi Retail Park development

London Plane

old granite curb   old granite curb

BOOM ST.
4 LANE - ONE WAY   PEDESTRIANS   TAXI RANK

(3.29)

London Plane

old granite curb   old granite curb

BOOM ST.
4 LANE - ONE WAY   PEDESTRIANS   TAXI RETAIL MALL

(3.30)

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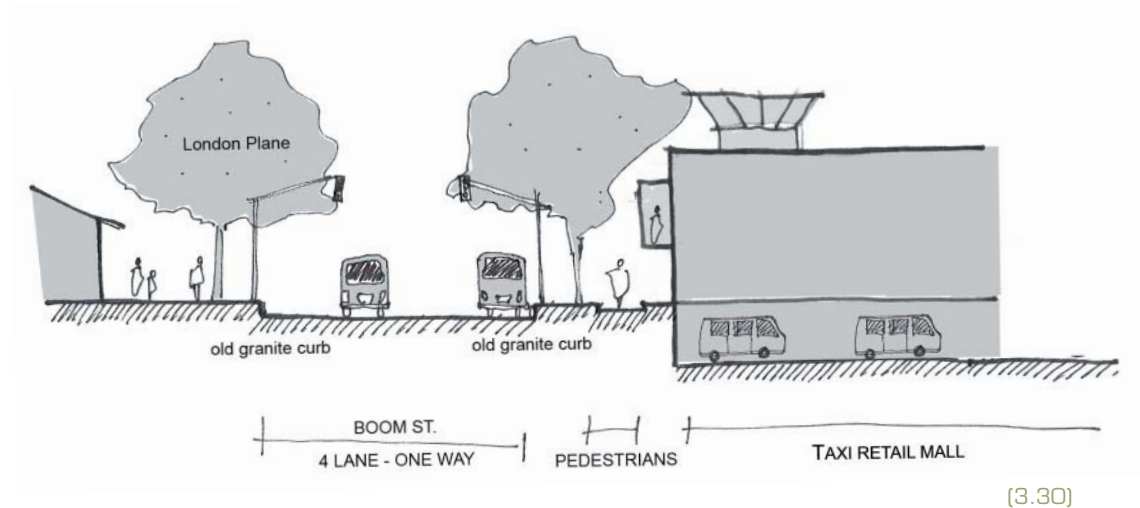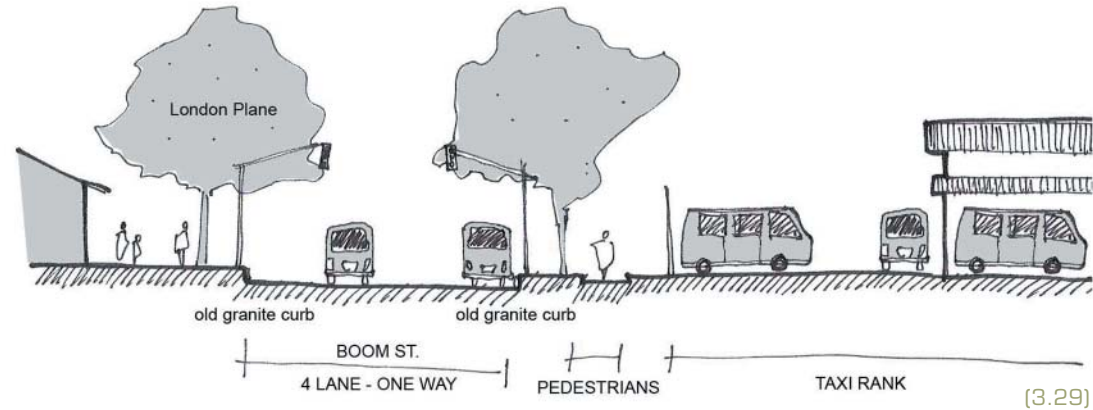
Figure (3.31):
Diagram indicating the different land uses around the site

ZOO

Prinshof School

plant cultivation

PRINSHOF

hospice & hospital

mission

MARGARETA

DE WAAL

zoo entrance

museum   ou huis

BOOM

dump

SOUTPANSBERG RD

veld

DR SAVAGE RD

Taxi Rank

V.D. WALT

ANDRIES

informal trading

informal trading

BOOM

BLOED

PRINSLOO

ZOO
RESIDENTIAL
COMMERCIAL
TAXI RANK
PRINSHOF SCHOOL

(3.31)
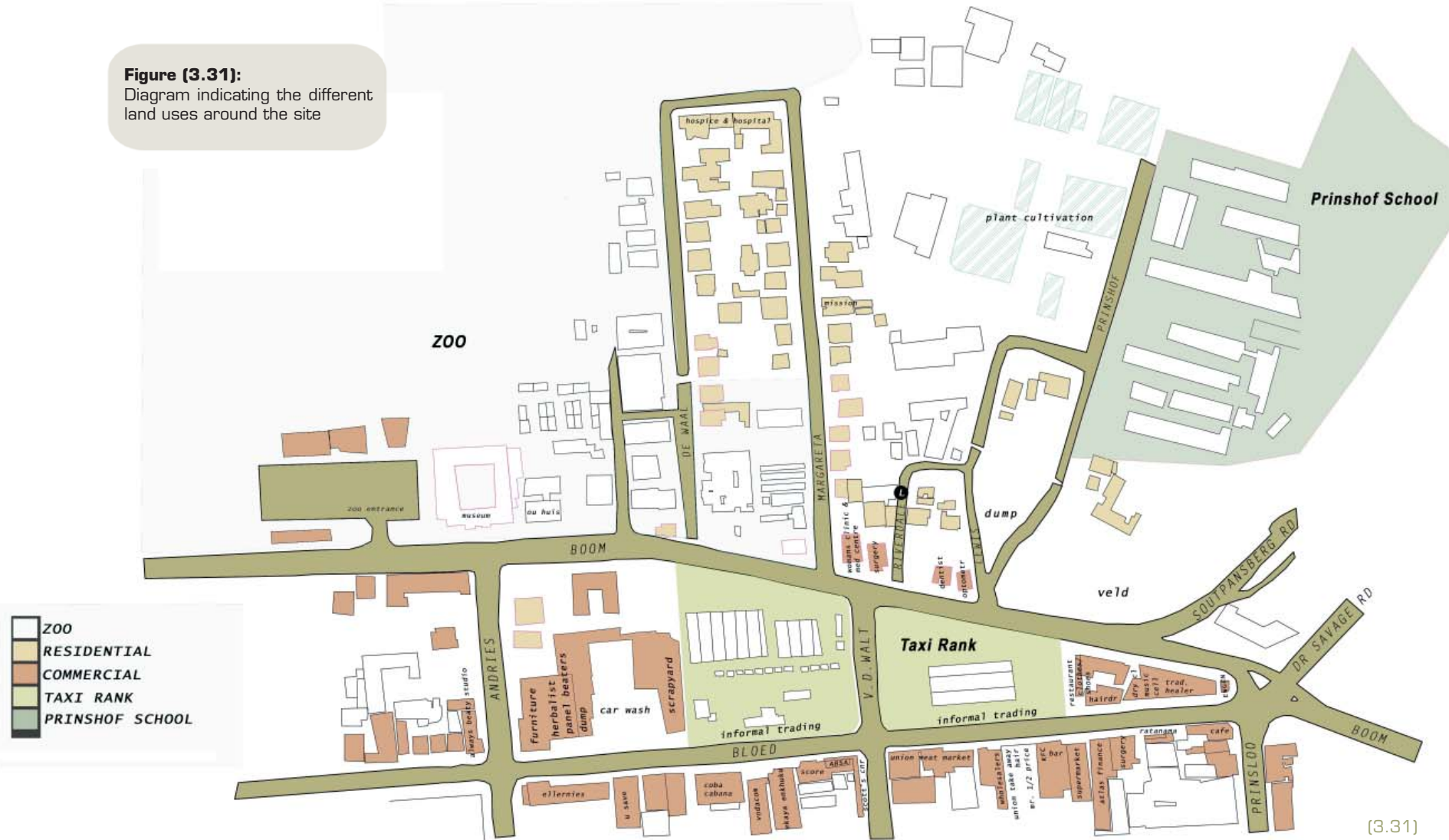
Bloed Street south of the site is a more business orientated street, with higher-rise buildings at both sides. These buildings are flanked by retail stores. The stores occupy the first floor of the multistory buildings with offices or housing over the stores. The buildings are mostly massed shoulder to shoulder with individual stores having their own entrance from the street. These buildings are typically separated from the street by only a sidewalk. The height of the buildings opposite the southern side of the site varies between 2 and 3 stories. Proposed future development will not exceed 4 stories.

(3.33)

(3.32)

(3.34)
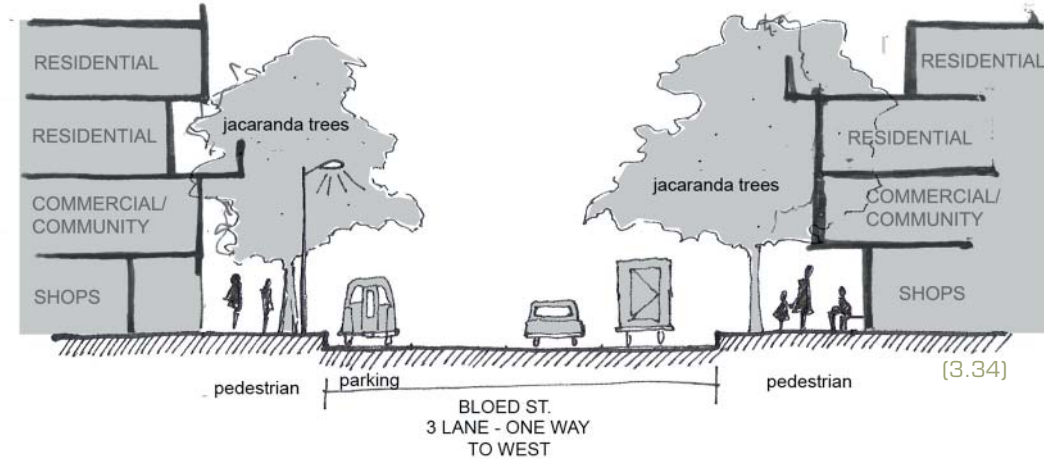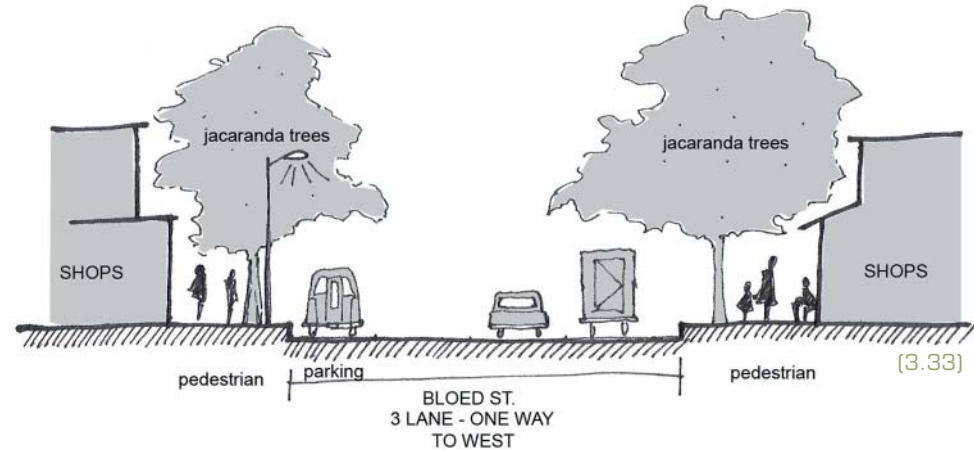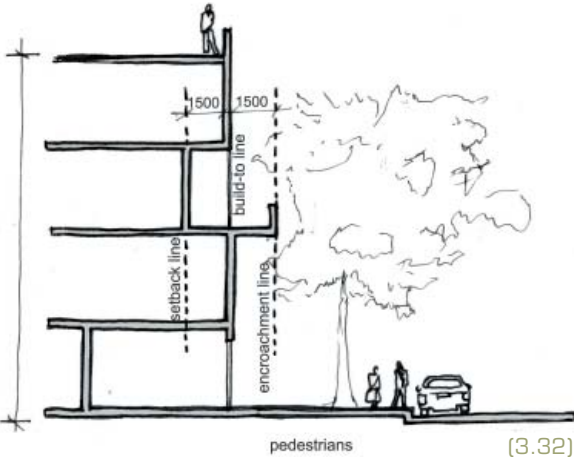
Figure (3.33):
Section through Bloed Street illustrating the existing street character
Figure (3.32) & (3.34):
Section illustrating possible future character of Bloed Street

jacaranda trees

jacaranda trees

SHOPS

pedestrian | parking | pedestrian | (3.35)

BLOED ST.
3 LANE - ONE WAY
TO WEST
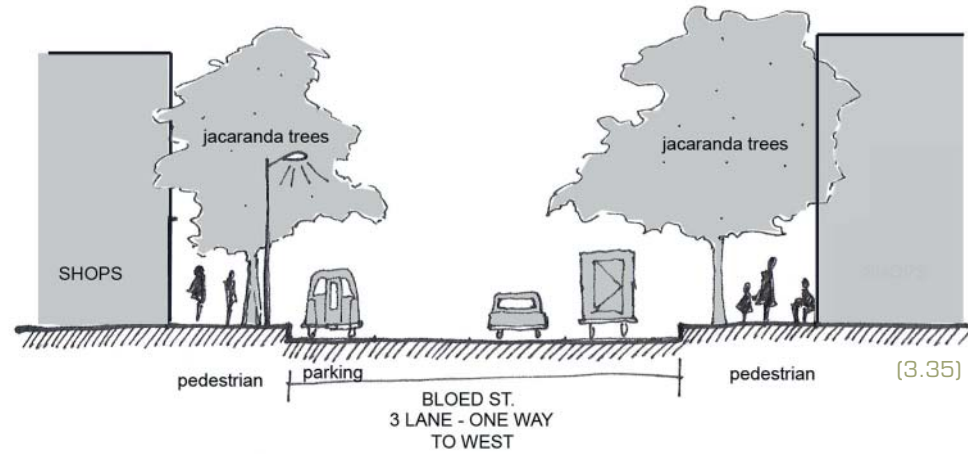
The ideal street character: Most spatial and regional planning strategies suggest the set back of upper levels of tall building to help create a pedestrian scale at street level and to mitigate unwanted wind effects (figure 3.32). However, as with most European cities, it is shown time and again that it is the more uniform building facades that create the ideal streetscape. The above statement will be explored and considered during the design process.

Figure (3.35):
Section through Bloed Street illustrating the ideal street character
Figure (3.36) & (3.37):
Typical European streetscapes: Views of streets in Paris, France

(3.36)

(3.37)

The vibrant nature of the intersection is an opportunity to generate a lot of energy within the building and to have an exciting on-street interface. Although in a neglected state, it already indicates the potential for being a landmark intervention. It is also important to incorporate the concept of a relief-zone on the corners of each site. These areas become small 'islands' where accidental meeting spaces can happen.

(3.39)

(3.38)

| RELAX ZONE | RELIEF ZONE | INTERCHANGE ON CORNER | RELIEF ZONE | RELAX ZONE |

| PEDESTRIANS | | | PEDESTRIANS | |
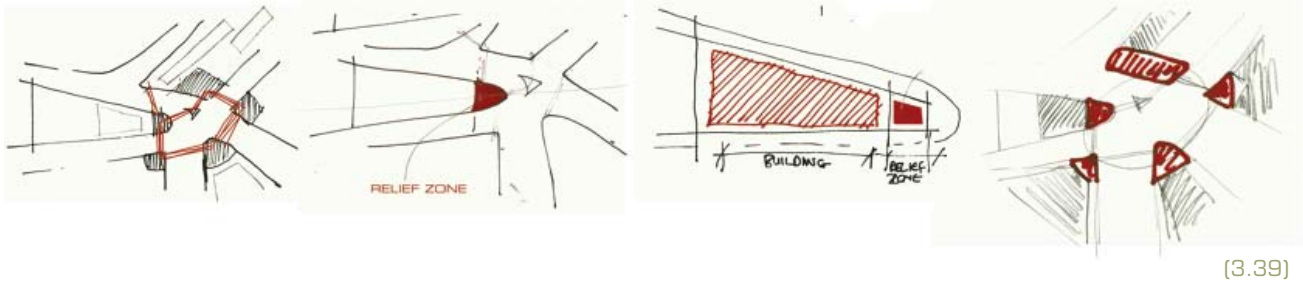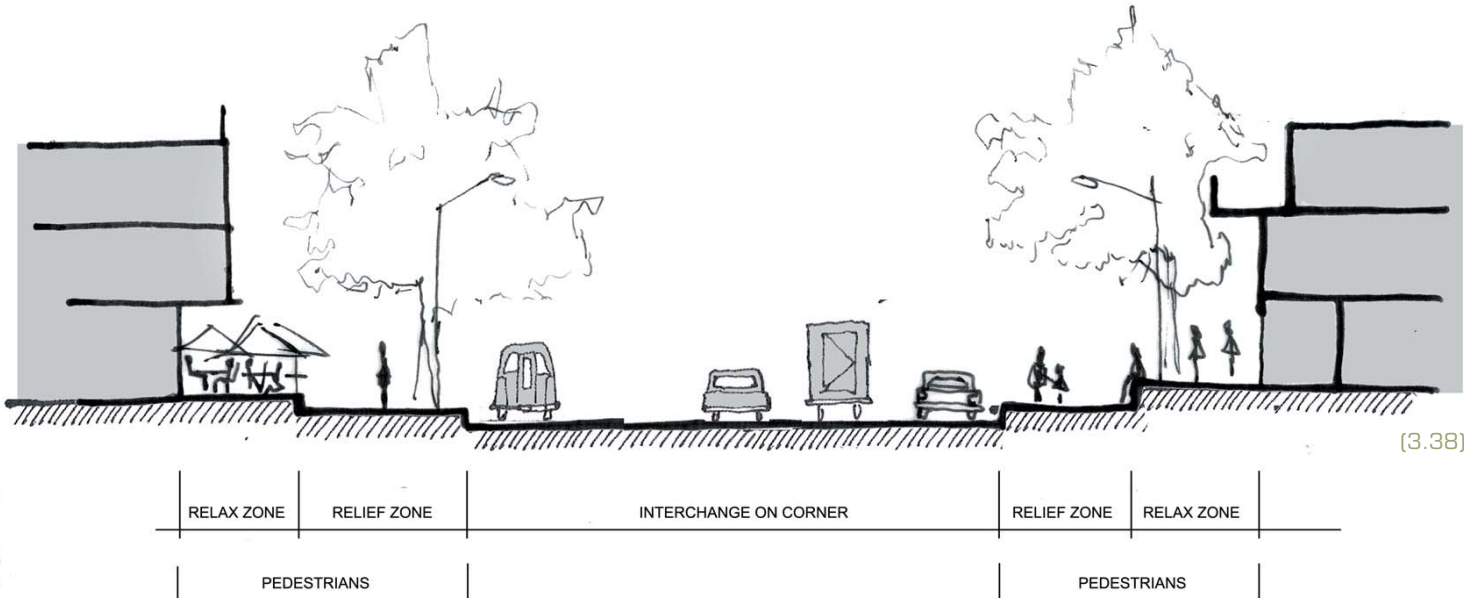
Figure (3.38): Section through the intersection
Figure (3.39): Sketches showing the concept of the 'relief zone'

(3.40)

Figure (3.40):
Photograph of the intersection taken from the adjacent building.

Future proposals and development: The street must support the activities of people on the adjacent properties, that is, it must provide optimal volumes of traffic at optimal rates to support the desired land uses and layout of those land uses. The street must be designed not to stifle nor overwhelm adjacent land use. The adjacent property to the site will be developed into a Taxi Retail Park; this Retail Park will be massed together in the form of a mall with individual stores only accessible from the interior of the building. However, there will be stores on the southern side of the development with their own entrance from the street. This will encourage on-street interaction of people on the sidewalks. For the northern side of the development, towards Bloed Street, the sidewalks will be less interactive. This becomes an opportunity for the proposed design.

Urban parking will vary between parking on the street, on surface lots behind the buildings, or in parking ramps. Thus, the same street could easily have very different character depending on the location of parking. The dimensions of the street itself do not create a rural, suburban, or urban street.

b Roads

Existing road order: Bloed Street, running to the west, consists of man made green space, with high traffic at intervals, due to the existing taxi rank. Bloed Street is also one of the main streets towards Marabastad located to the west of the city.

The Jacaranda trees contribute to a pleasing pedestrian experience. The building should have an appropriate response to this soft space. The pleasant view towards the pedestrian walkway will contribute aesthetically to spaces within the building.

Boom Street has less pedestrian activity with a higher order of traffic in the direction east from the city center. This is partly due to the nearby taxi rank, but also due to the fact that Boom Street forms the periphery of the CBD, and therefore becomes one of the main feeding roads around the Inner City towards the east. The north side of the building therefore demands a hard edge, with appropriate permeability to allow some degree of on-street interaction. It is also the only street within the city of Pretoria planted with Plantane trees. The pleasant contribution of the trees should be incorporated within the design precinct.

Influences of future proposals and development: The proposed Bloed Street Taxi and Retail Park will have two main influences on the roads within the immediate surroundings of the site. Firstly it will increase the amount of traffic moving through the area. Secondly, there will be a more structured system according to which the traffic will flow around the site.

(3.41)

FUTURE BLOED STREET TAXI
RETAIL PARK DEVELOPMENT

BLOED STREET TAXI RANK

MAJOR TRANSPORT INTERCHANGE

SITE
(BUILDING TO BE DEMOLISHED)

PEDESTRIAN MAIN ROAD
(BLOED STREET)

MAJOR TRAFFIC INTERSECTION

ROAD INTERFACING THE INNER CITY

FUTURE DEVELOPMENT

GATEWAY INTO THE CITY
(DR SAVAGE RD)

(3.42)
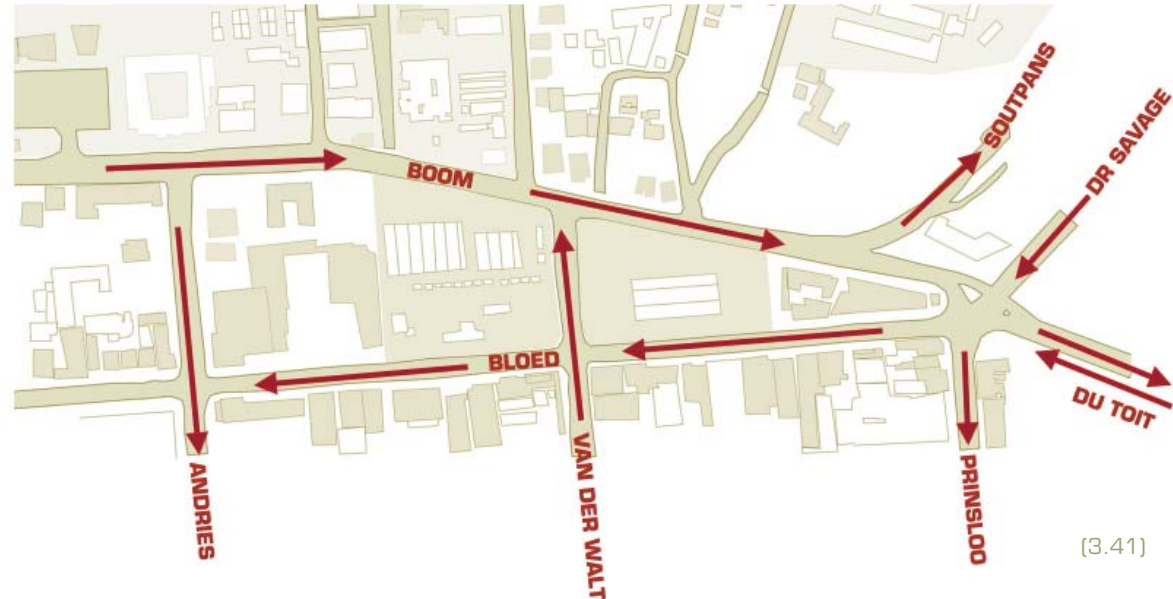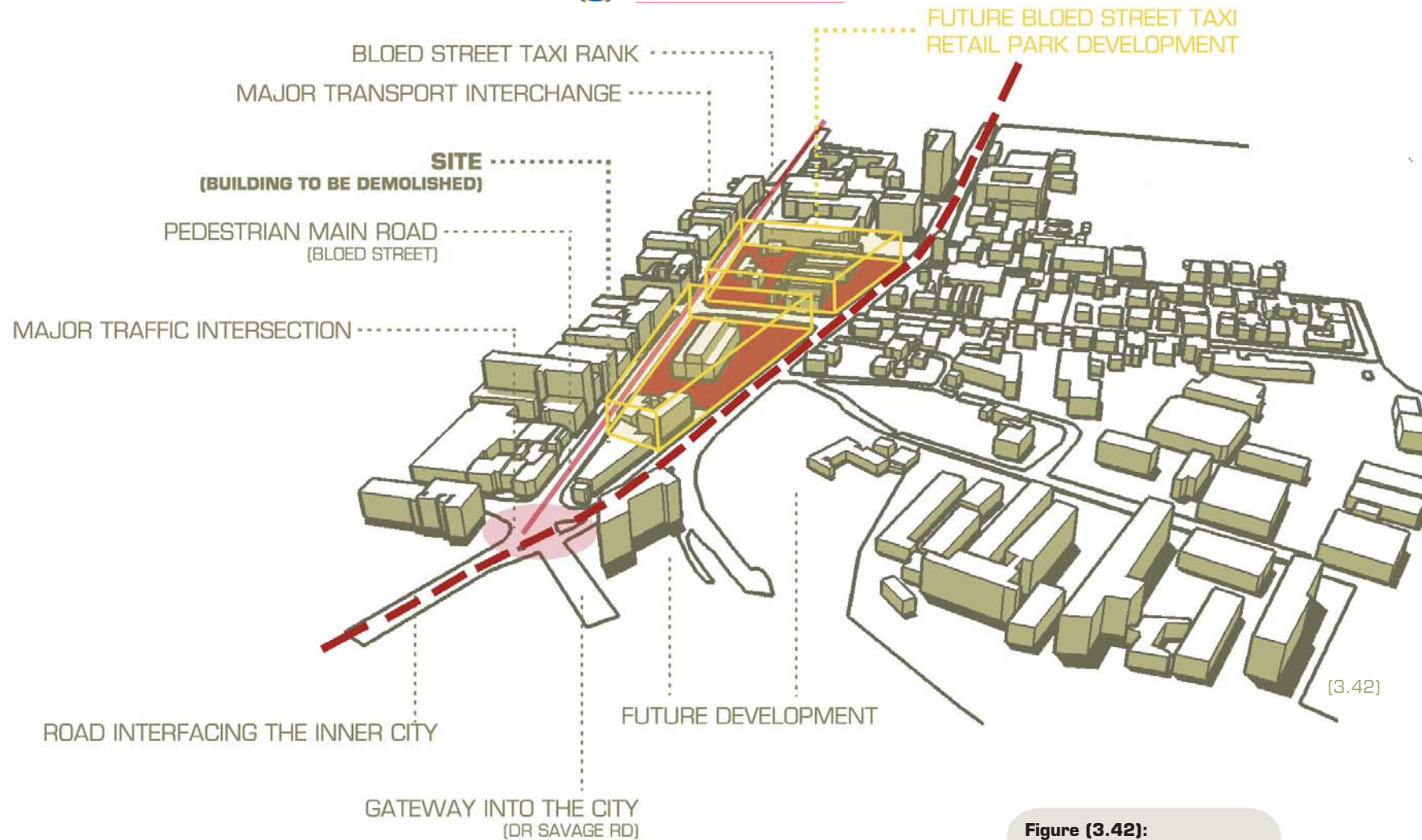
Figure (3.42):
Axonometric model of the immediate context of the site, indicating the major roads

c Circulation

Urban fragmentation lies at the heart of many of the problems of modern cities. It severely constrains the economic potential of cities and urban regeneration developments find it hard to create sufficiently high levels of pedestrian movement. The basic requirement for a viable pedestrian infrastructure is a simple, interconnected, spatially integrated, continuously animated and intelligible public realm. Critical analysis is required of the urban environment beyond a project's designated boundary to understand how the surrounding urban layout directly affects movement in and around a particular site.

The pedestrian public realm is the key to successful urban redevelopment. In one sense, vehicular transport systems are the means to deliver pedestrians to the myriad choice of urban facilities that cities afford. The strategic design task for a sustainable pedestrian movement is to build new spatial structures that solve the problem of urban fragmentation. The aim would be to harness urban development sites for their full economic and social potential by building local 'movement economies' based on powerful pedestrian infrastructures.

Good pedestrian accessibility then becomes the catalyst for successful urban regeneration. Designing urban layouts that are both globally integrated and locally distinct will bring to urban developments a mix of users – workers, residents and visitors – and with them the essential ingredient for economic vitality, social cohesion, urban safety and investment surety.

Pedestrian movement becomes the key generator of circulation and form.   The building must therefore respond to present pedestrian patterns and simultaneously inform a pedestrian friendly environment. The building will have permeable edges to involve passers-by with the activities of the building.

(3.43)

Figure (3.43) & (3.44):
Photo's of the taxi rank (February 2007) being the key generator of pedestrian activity around the site

(3.44)

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Figure (3.45):
Existing bus and taxi routes around the site

Figure (3.46):
Future bus and taxi routes around the site

(3.45)

(3.46)

PRIMARY AND SECONDARY
BUS ROUTES

BUS STOP

TAXI ROUTE AND UNDEFINED
STOP

TAXI PARKING & PICK-UP
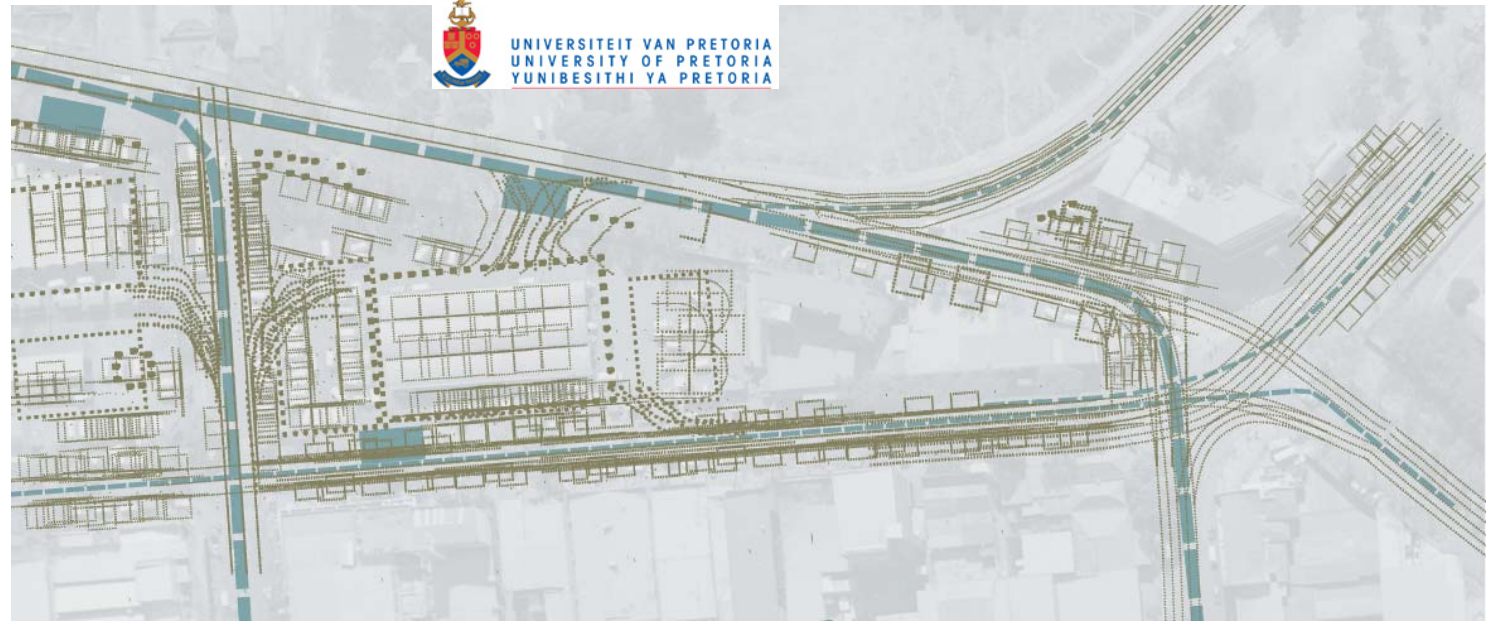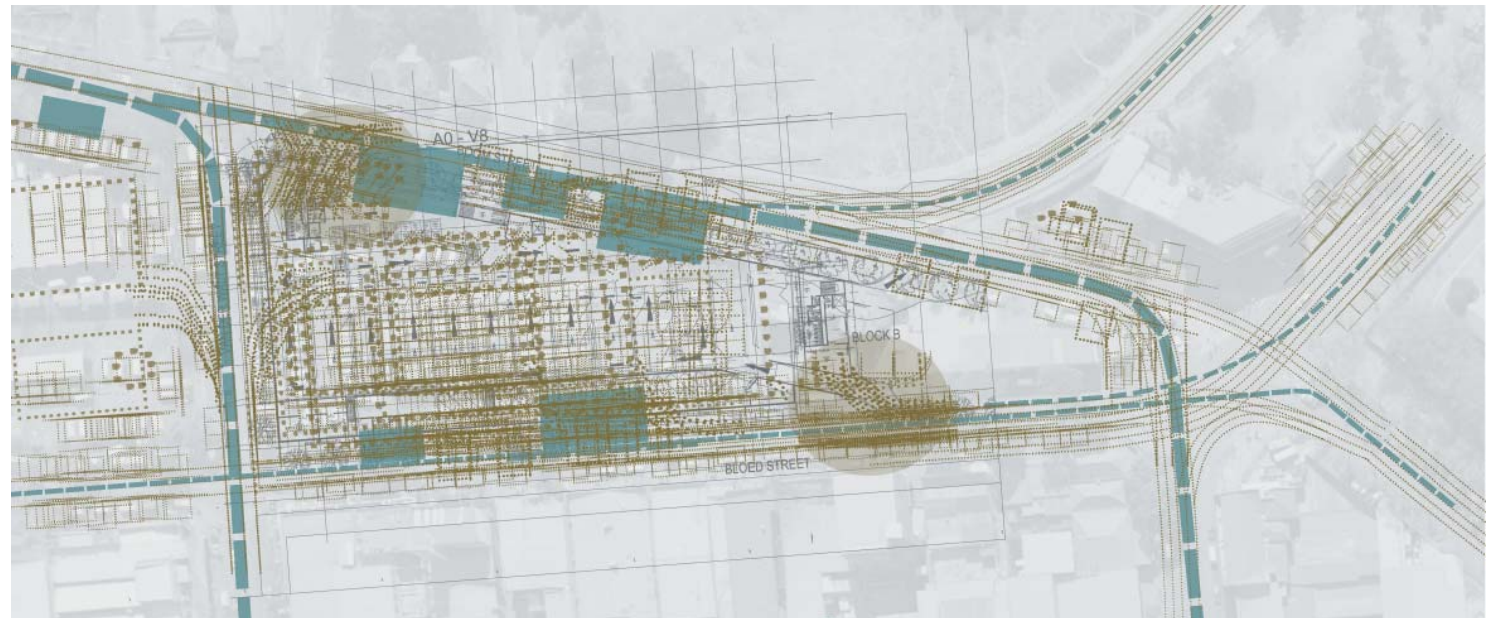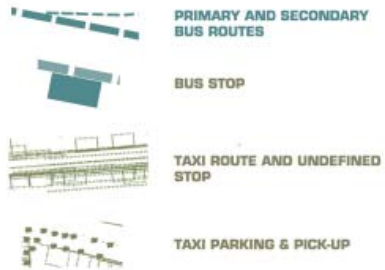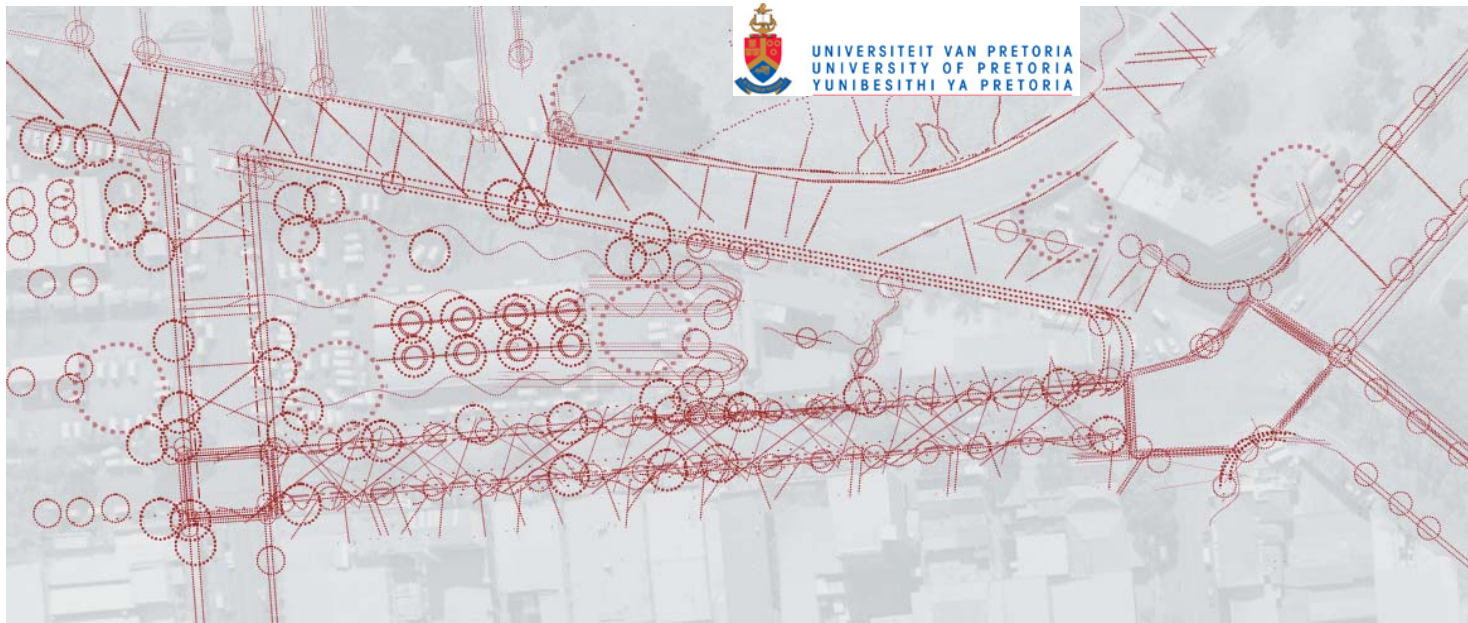
(3.47)

Figure (3.47):
Existing pedestrian circulation
patterns around the site
Figure (3.48):
Future pedestrian circulaiton
patterns around the site

(3.48)

INTENTIONAL

GATHERING

LINGER

PERIODIC

CROSSING

VAGUE
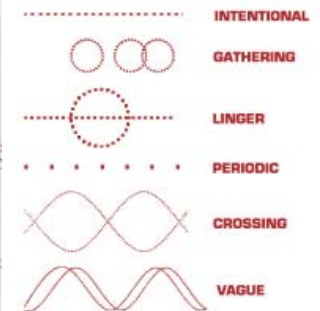
Figure (3.49): Artist impression of the new taxi facility in Bloed Street

Figure (3.50): Position of site in relation to the new development

Figure (3.51): Relocation of the existing taxi rank

(3.49)

(3.50)

d Adjacent buildings

Construction activities for the Bloed Street Taxi Retail Park will start in April 2007. The expected opening of the Bloed Street Mall is 24 October 2008.

The Bloed Street Mall development will entail the following:

- Taxi ranks
- Motor related facilities, i.e. tyre fitment centre, workshop, spares, etc.
- Informal trader stores
- 22 000m² retail shops

The relocation of the existing taxi ranks and informal traders will take place between February and April 2007. The temporary ranking facility will be positioned in the block surrounded by Bloed, Boom, Andries and Paul Kruger Streets.
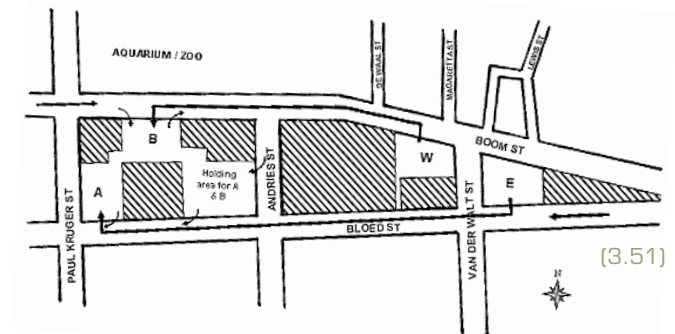
(3.51)

3.5.3 Macro Climate

Topography: The study area falls in a gentle slope from the south-east to the north-east at about 1:35, with a mean level of 1 300m above sea level at the intersection of Boom and Bloed Street. The slope places no constraints on development in the area (Van der Waal 1990:10).

Geology: Geologically the study area is of Precambrian origin. It forms part of the Transvaal system, and more specifically the Daspoort Stage of the Pretoria series.

The geological map (figure 3.52) shows most of the study area underlying geology as composed of localised Andesitic laval with interbedded agglomerate, shale and tuff (Van der Waal 1990:13). A zone of localised shale and siltstone, with quartzite and grit at the top, penetrates the area from the east-west. The broader geological structures are shown in figure… For construction purposes soil conditions are such that highly variable foundation conditions may be expected to occur, from solid rock at shallow depth to potentially expansive residual andesite soils.

Climate: The area is characterized by generally high temperatures. Relatively high local humidity frequently combines with high afternoon temperatures in summer to cause an uncomfortable heat.

Rainfall is seasonal (summer rains), with an average of 741mm per year. Mostly precipitation occurs in thunderstorms with rates of around 90 to 100mm per hour. Hailstorms are fairly common and can be severe (City of Tshwane Weather Services).

Average annual cloud cover is 33%, varying between 13% in July and 54% in December. Prevailing winds are calm, and blow from the north-east in the morning, backing to north-west in the afternoon. During winter occasional cold snaps bring wind from the south, while in summer thunderstorms are accompanied by turbulent wind patterns (City of Tshwane Weather Services).

3.5.5 Micro Climate

On a micro-climatic level the proximity of the Apies River valley contributes to some site-specific conditions. For instance 89 days of frost per year are recorded on average in these areas, as apposed to 60 days at the weather bureau up in Pretoria. Lower averages for the winter months are also recorded and the diurnal range of temperature difference between day and night exceeds the Pretoria average (ibid).

From the point of view of urban settlement the main problems posed by the climate within the precinct area are the high summer temperatures, the high diurnal temperature ranges, the intensity of precipitation when it occurs, and the inefficient dispersal of air pollution.

Pollution must be addressed in broader metropolitan context, with emphasis on prevention. The other climate factors will be addressed through efficient climatic design of the building, with emphasis on building mass that counters diurnal temperature movements, shade and shelter against heat and precipitation and the use of appropriate materials.
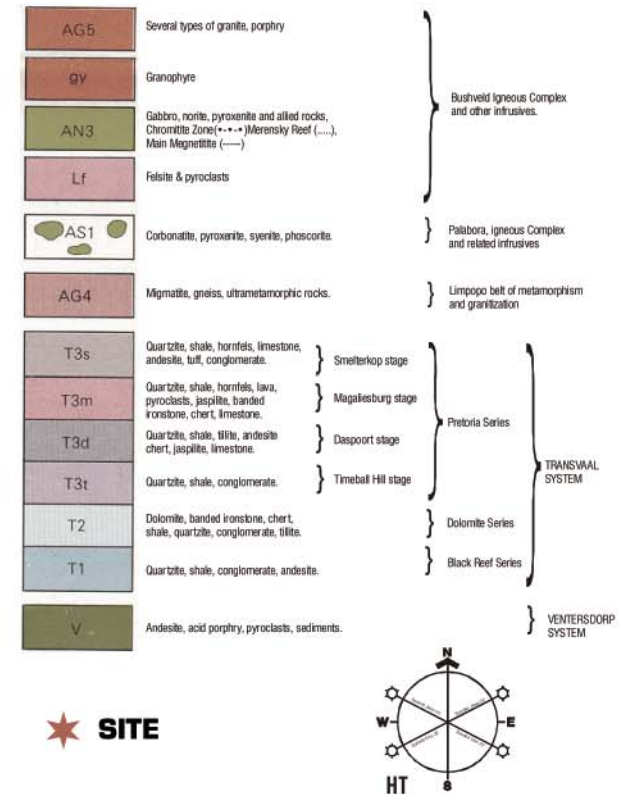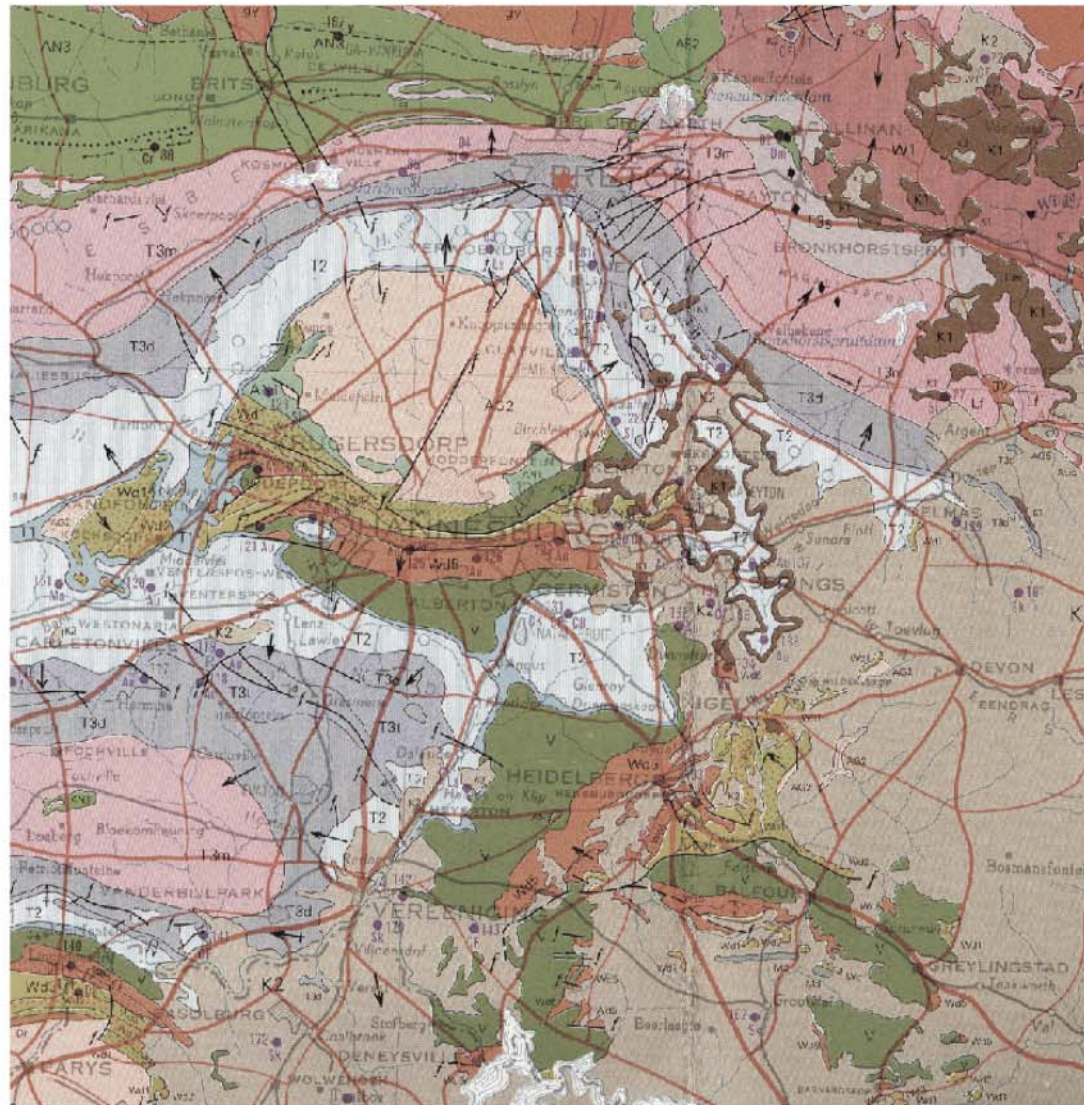
Figure (3.52):
Geology map of the greater City of Tshwane

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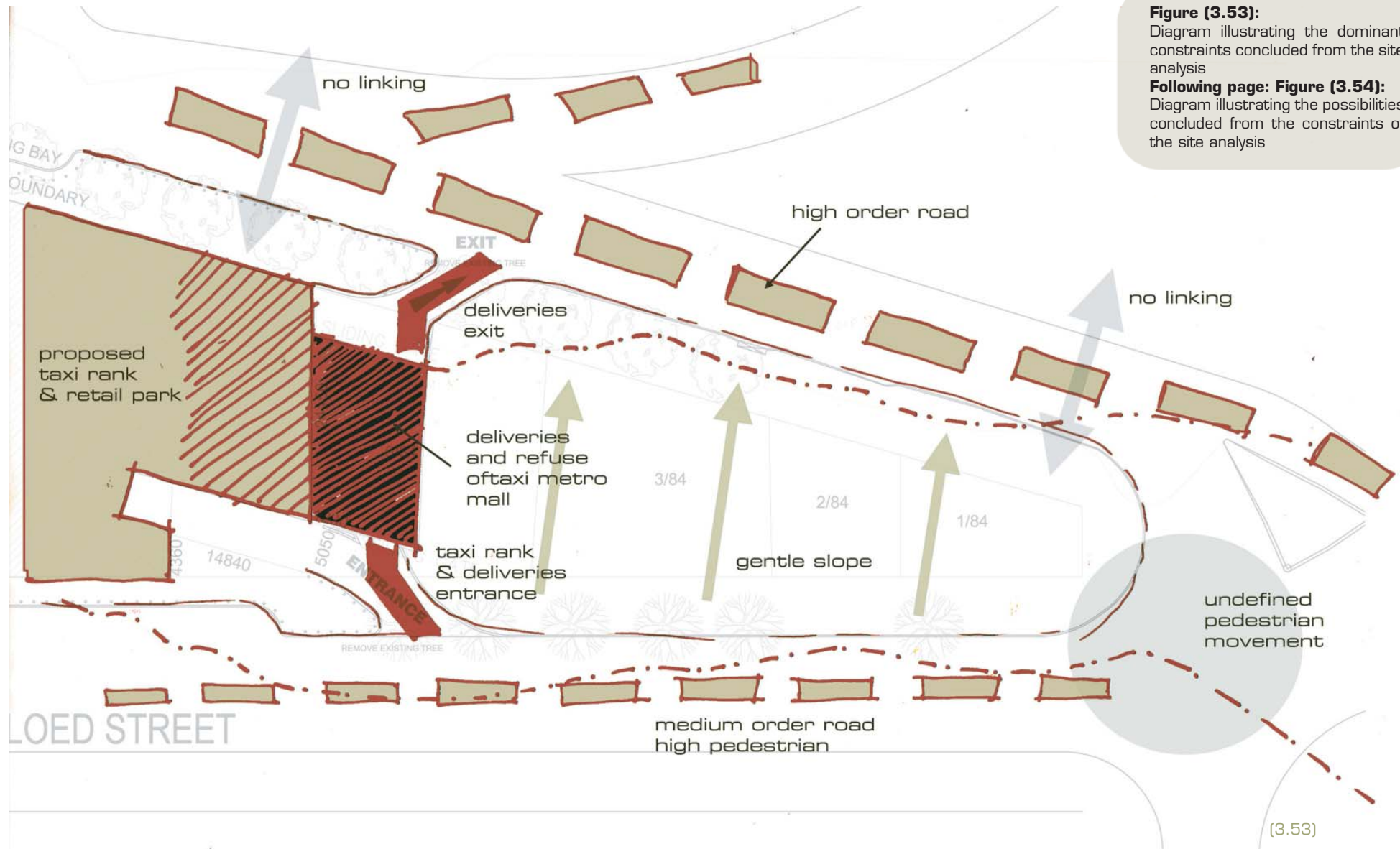
Figure (3.53):
Diagram illustrating the dominant constraints concluded from the site analysis
Following page: Figure (3.54):
Diagram illustrating the possibilities concluded from the constraints of the site analysis

no linking

IG BAY
OUNDARY

EXIT

REMOVE EXISTING TREE

high order road

no linking

SLIDING

deliveries exit

proposed taxi rank & retail park

deliveries and refuse oftaxi metro mall

3/84

2/84

1/84

taxi rank & deliveries entrance

4360

14840

5050

ENTRANCE

gentle slope

undefined pedestrian movement

REMOVE EXISTING TREE

LOED STREET

medium order road high pedestrian

(3.53)

on-treet commercial
exceeded

responsive towards
adjacent building

pedestrian
crossing

pedestrian
crossing

link with adjacent
public spce

responsive to street
and walkway
(on-street commercial)

solid

solid

private
public space

solid

open public space

on-treet commercial
exceeded

pedestrian
crossing

entrance to basement parking

responsive to sret
and walkway
(on-street commercial)

public space linked
with stret activity

(3.54)

3.6.1 Constraints summarised:

Bloed Street consists of medium order traffic and high order pedestrian patterns.

The intersection has ill-defined pedestrian movement and circulation.

The entrance and exit lanes to the proposed new Taxi Retail Park blocks direct interaction between the two interventions.

The delivery and refuse area of the proposed new Taxi Retail Park is located at the west end of the site and also blocks direct interaction between the interventions.

Boom Street is a high order traffic road, with less pedestrian activity.

The gentle slope of the site, although not constraining any development, must be carefully considered during stormwater design.
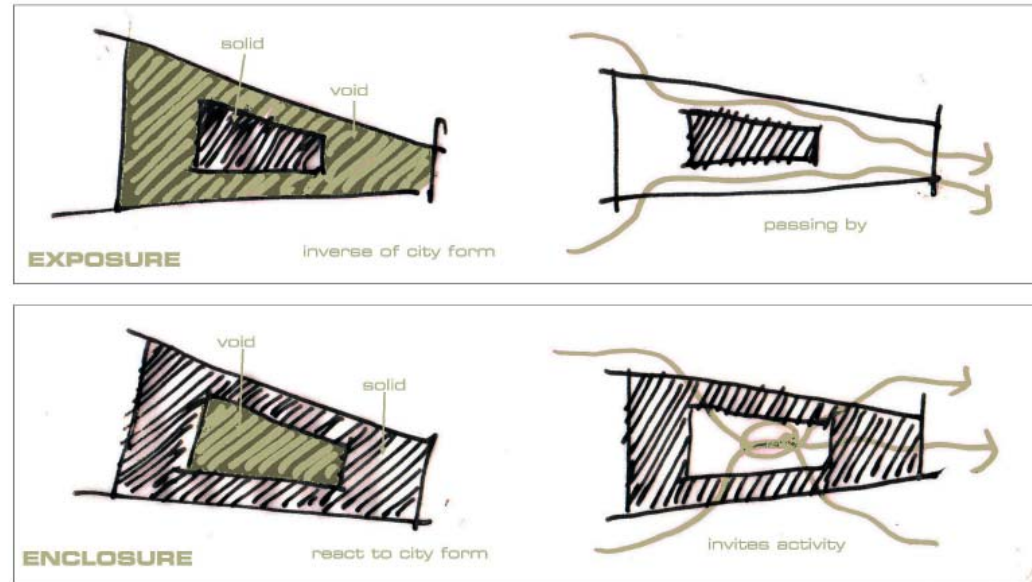
(3.55)

Figure (3.55):
Concept sketches indicating the relationship between exposure and enclosure to city form

4

TRANSUDE

Precedents

Transude *vb* to pass through the interstices;
to release in drops or small quantities

Mason's Bend is located in Alabama's former cotton belt, and home to four extended families. Most live in trailers or poorly constructed homes. This rural cluster of homes never had a community gathering space. The chapel was built to provide a space to hold meetings, provide childcare and worship. In addition to creating a central node within the hamlet, residents hoped the structure would serve as a transportation point for a mobile library and a traveling health centre, bringing education and medical services to the community.

The walls of the structure are made of rammed earth containing local clay, cement, and a small amount of water. The walls are capped by a rusting metal drip edge that compliments the color of the earth. The roof is a combination of aluminum sheets and 1980's GMC sedans car windows salvaged from a Chicago scrap yard. Both aluminum and glass are bolted to a light weight metal frame. Mr. Harris, owner of the Butterfly House, donated the land for the centre and now tends to its beautiful garden.

Sam Mockbee, part of the design team, once described the building as 'as cutting edge as any piece of architecture in the United States' (AFH 2006: 196). For him architecture is about shelter for the spirit.

(4.1)

(4.2)

Figure (4.1):
The chapel is always open, to provide a space for contemplation and respite from the heat. (AFH 2006: 199)
Figure (4.2):
The sculptural glass skin gives the building an unanticipated appeal. (AFH 2006: 198)
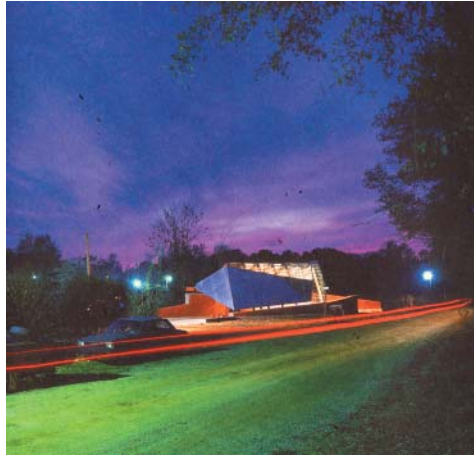
(4.3)

(4.4)
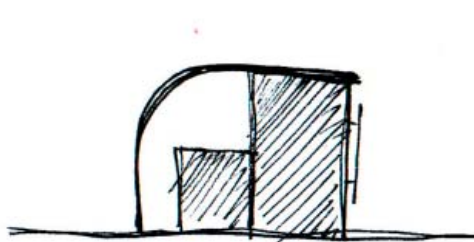
(4.5)

Figure (4.3):
At night the chapel acts like a beacon, signaling Mason's Bend to passerby. (AFH 2006: 197)
Figure (4.4):
View from inside the chapel
Figure (4.5):
Early concept sketches exploring shelter vs building

Relevance: While urban policy, infrastructure and economic development interventions are important tools to cross the gaps of disarticulated cities, it remains the presence of urban residents themselves and their varied uses of each other as instruments to realise particular aspirations and imaginaries that constitute the most significant form of urban connectivity. Individual urban selves mark both the gap and the connection in interwoven economies - material, symbolic, and spatial. The gap is between what buildings, people, spaces, objects and gestures can be normatively or customarily used for and how they can be put to task to do more than what is specified. This is closely bound to Dewar and Uytenbogaardt's idea of qualitative settlements:

> Settlements of quality enrich the living conditions of all people, both rich and poor. They are not dependant upon technological pre-conditions to perform successfully, and they accommodate ideological and political transitions. They are not based on ephemeral conditions, but are rooted in a basic understanding of human activity and human needs. (Dewar and Uytenbogaardt 1991: 12)

Here, the people constitute themselves as unavoidable insertions into operations of all kinds by only using the 'primitive' structure as place of contemplation and respite from the heat. However, it becomes more than a shelter; its act as a connection among disparate uses and users.

Implementation: The design intervention will challenge the concept by acting as part of a patchwork of the increasingly dense infrastructure of the city. The city in its very physicality has been largely disjoined and deprived of an overarching institutional logic or public discourse capable of tying its heterogeneous residents together on some conviction of common belonging or reference.

The intervention becomes the catalyst through which the users can put together connections between the diverse infrastructures, spaces, populations, institutions and activities of the city. (figure 4.6)

Area in need of densification

[4.7]

site

(4.6)
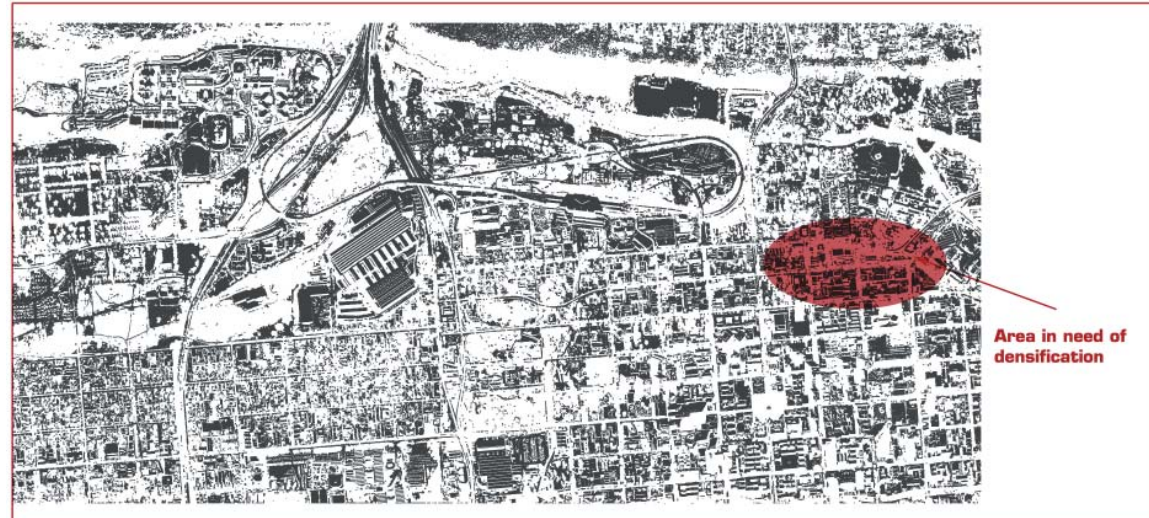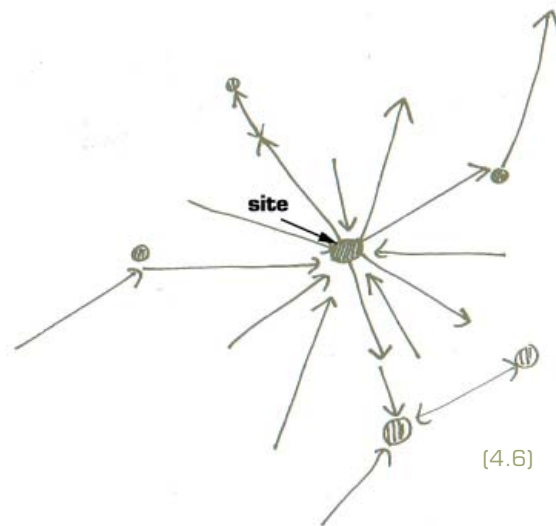
Figure (4.6):
Sketch illustrating the connections between systems and places within the city
Figure (4.7):
The image indicates the site and its surroundings as an area in need of densification

4.1.2 Constitutional Court of South Africa

The new Constitutional Court of South Africa, situated on Constitution Hill, is a remarkable feat of architectural daring and hope. It celebrates the ideals of a progressive Constitution; commemorate the suffering and struggles of the country's past without slavishly doing obeisance to history and give visible form to the belief that all are equal before the law (Law-Viljoen 2006). The greatest challenge of the building was to embody the moment – both historically and architecturally – and to see into the future.

While architecture in South African cities is an agglomeration of European styles - Cape Dutch, Victorian, Edwardian, Art Deco and more recently, Tuscan, the Constitutional Court reflects the new democratic order, and shows how the city is embracing the challenges of transformation and growth.

Figure (4.8):
The Court at dusk
Figure (4.9):
Looking from Hillbrow along the southern façade of the building towards Constitution Square

(4.8)

(4.9)

Apartheid has had a profound effect on the country's architecture, and is still very evident. 'In no other country does architecture and urban planning bear such vivid witness to history, to politics and to social division. And these deeply embedded traces of apartheid remain ubiquitous in South Africa today' (Mabin, 2007). Apartheid buildings are almost always recognisable by their closed, exclusive nature, often imposing an uneasy presence difficult to ignore. Paul Wygers, an architect at Urban Solutions, one of the consultants on the project, said of the court, 'The building needs to be as active as possible - the court will not be a monument, it will be a people-inviting place.' The court did meet these demands:

> '...the warmth and openness of the building was undeniable. It was a court for the people, expressing a range of cultural expectations of the concepts of justice and democracy.' (Law-Viljoen 2006)

The new-style architecture is changing the feel of South African cities. Many, who were confined by apartheid to townships and rural Bantustans, or to the countries beyond our borders, have converged on the streets of our cities to claim its promise of a better life. Public space is being occupied in new ways.

It is not about a style or fashion but about a new culture of planning and building, which creates a new approach to architecture and space.

> 'It was to become an iconic building, celebrated for its daring, it's combination of dignity and accessibility, its warmth and light, and its embodiment of the hopes of a young country.' (Law-Viljoen 2006)

While some would argue that change in South African society is not happening fast enough, the Constitutional Court epitomises a new, open society that caters for creative spaces where people can mingle with each other. The architecture of this work is more spatial than visual. The design space anticipates new ways of how people live. It reflects rural habits within an urban setting - a culture going through a transition.

(4.10)

Figure (4.10):
Eastern approach to the Court
Figure (4.11):
Drawing showing the position of the court in relation to Constitution Square

(4.11)
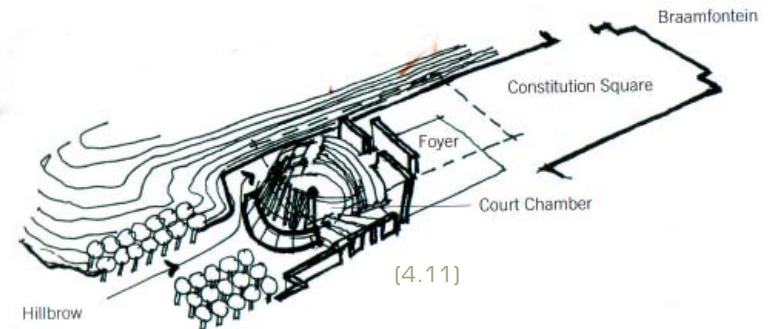
Figure (4.12):
Cross-section showing the direct relationship between Constitution Square, the raised entrance podium, the Foyer and the Court Chamber

Figure (4.13) & (4.14):
Early concept drawings imagining everyday activity around the Court

(4.12)

FOYER   COURT CHAMBER

(4.13)

(4.14)
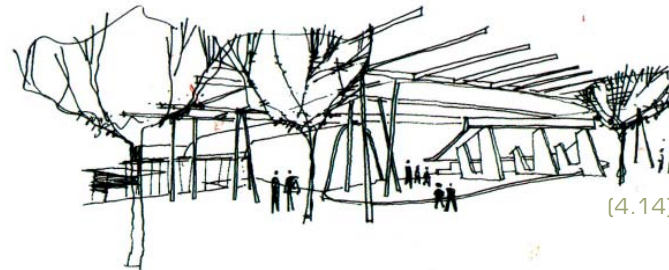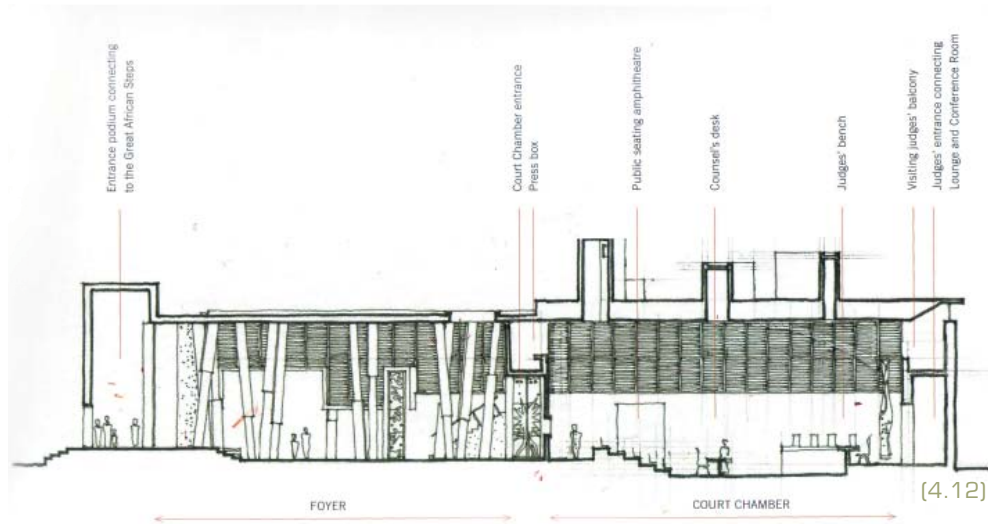
Relevance:

Warmth and openness of the building: The Constitutional Court is an invitation to newness and change. Whereas courts are known to be private and daunting, the Constitutional Court is happy, inclusive and open. One feels a participant there. This is a feeling encouraged by such simple things as the levels of seats in the Court Chamber. In that space one feels that one is part of the whole.

Active participation and accessibility: The court becomes part of the public life of the surrounding area, open to be freely used and visited.

Abstraction of tree canopy: The foyer was designed as an abstraction of a tree canopy: 'The shade of a tree as a place of communal gathering.' (Law-VIljoen 2006) Light falls through glass splinters in the concrete flat roof to create dappled light. Columns are arranged randomly at angles to reinforce the tree image.

Artist involvement: The idea of artist involvement in the design and building process is a wonderful aspect of the Court. This have enriched spaces and detailing. The ideal would be to involve artists as early as the concept stage of the design, to create the opportunity for a true integration of artworks into the built form.

Implementation: Being confronted with the concept of how people live in the South African urban environment, and by considering our climate as influential to the design of urban space, the author initiates an alternative urban fabric; one in which the segregation of 'inside' and 'outside' is being enriched by a third dimension of the 'in-between'. The 'outside' dimension, as within the organization of the traditional African village, being defined by a border or the composition of the structures. (figures 4.16 and 4.17)

The transition from the outside to the inside therefore evolves around being in beyond the 'unfamiliar', towards that which is known.

(4.16)

(4.17)

(4.15)

(4.18)

INSIDE

OUTSIDE

IN-BETWEEN DEFINED BY THE COMPOSITION
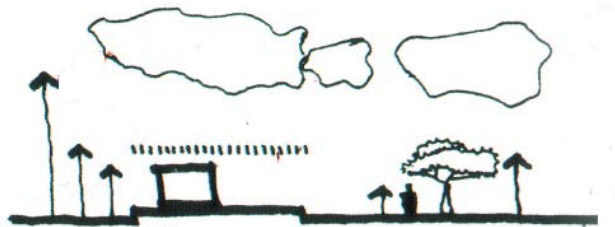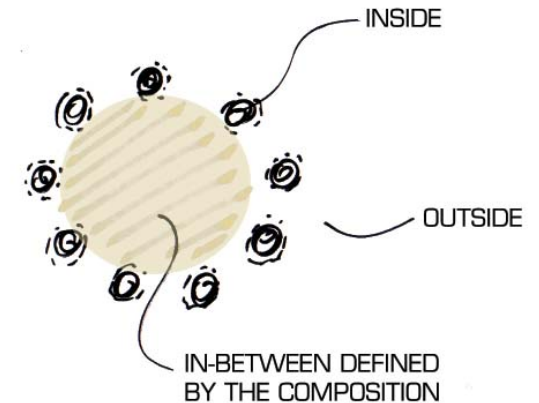
Figure (4.15):
Drawing showing the relationship between ideas of 'inside' and 'outside'. The foyer is intended to be as much an inside space as an outside space, its roof a canopy of clouds and leaves.
Figure (4.16) & (4.17):
Traditional african villages
Figure (4.18):
Sketch explaining the concept of 'inside' and 'outside'.
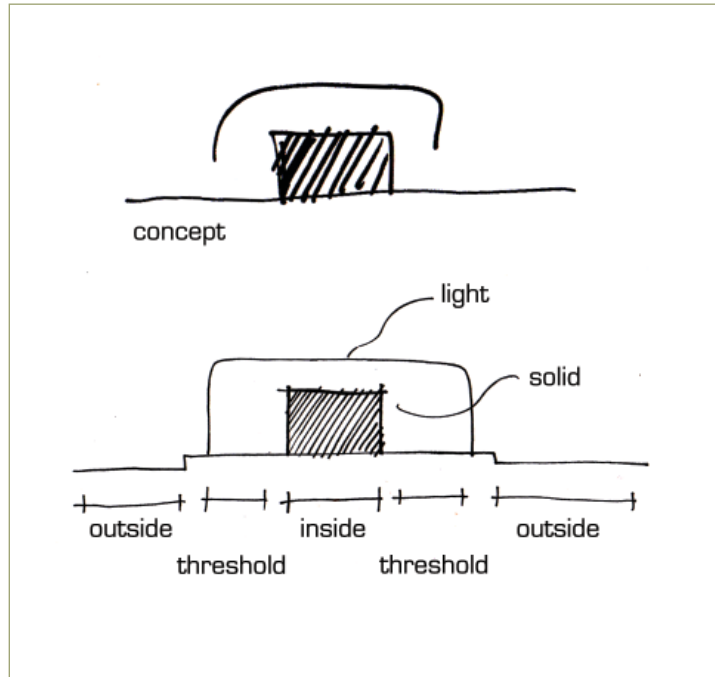
(4.19)
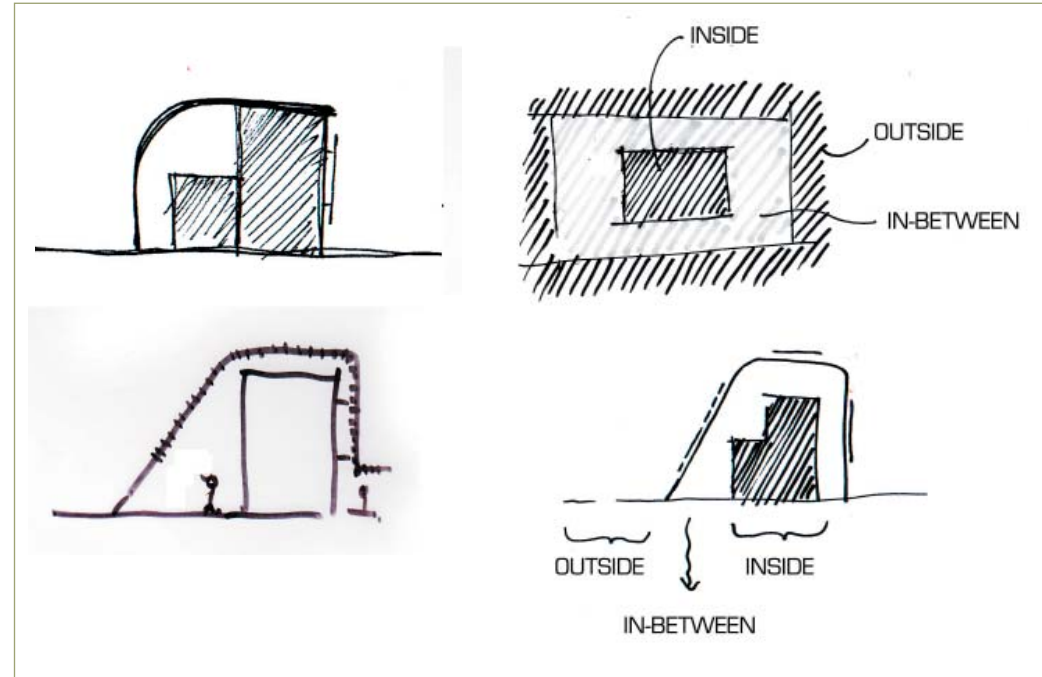
(4.20)

Figure (4.19):
Sketches showing the first concept of 'inside' and 'outside' as being used in the design investigation

Figure (4.20):
The relationship between 'inside' and 'outside' as been used within the Constitutional Court, is taken further within the design investigation, by adding the third dimension of the in-between

The following section involves the analysis of specific precedents so as to inform the technical requirements for the selected function of the building. The technical issues which will be considered include the following:

- Spatial interconnectivity
- Circulation
- Sizes

The aim of diagrammatically analyzing the spatial connectivity and circulation requirements of the precedents is not to inform the architectural language, but merely to inform decisions with regards to the functioning of the selected facilities within the building. The different facilities and selected precedents are:

- Cafeterias

  - Condé Nast's Cafeteria, Times Square, New York by Frank O. Gehry and Associates

  - TV Studio Cafeteria for Televisa, Mexico City by TEN Arquitectos, Architect

- Clinical testing and X-rays

  - X-ray department at King Edward Memorial Hospital, Ealing

4.2.1 Condé Nast's Cafeteria, Times Square, New York

(4.21)

(4.22)

(4.23)

Figure (4.21), (4.22) & (4.23): Interior views of the cafeteria

SPATIAL INTERCONNECTIVITY
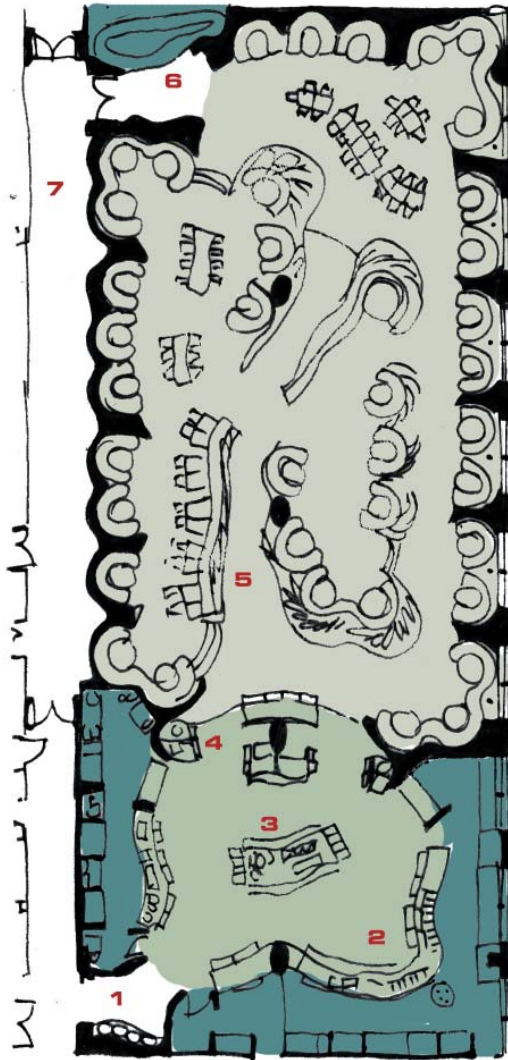
CIRCULATION

(4.24)

1 Entrance
2 Hot buffet
3 Salad bar
4 Register
5 Dining Area
6 Tray deposit
7 Exit corridor

(4.25)

TRAY DEPOSIT
EXIT
DINING
KITCHEN
SERVING
ENTRANCE
KITCHEN

(4.26)

TRAY DEPOSIT
EXIT
DINING
KITCHEN
SERVING
ENTRANCE
KITCHEN

entrance → serving → dining → tray deposit → exit

(4.27)
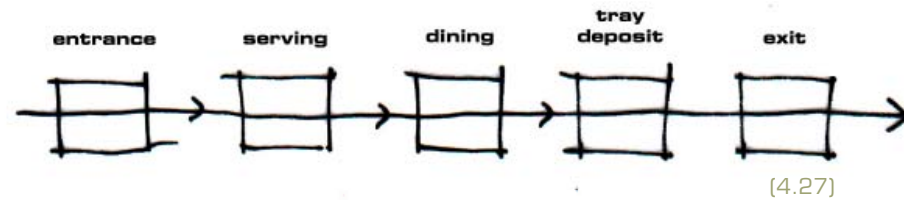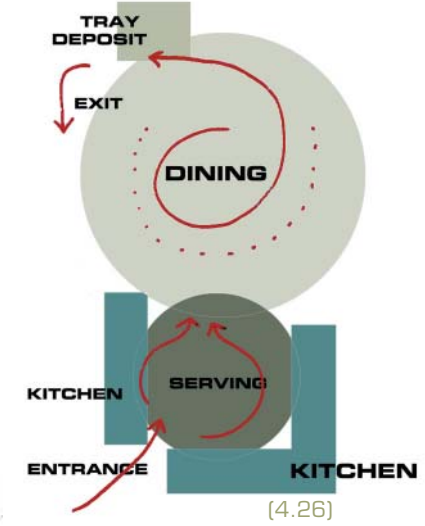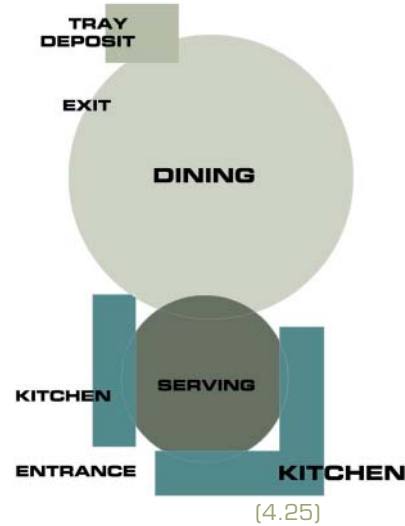
Figure (4.24):
Ground floor plan
Figure (4.25) & (4.26):
Spatial connectivity and circulation
Figure (4.27):
Diagram showing the circulation as a linear aproach

4.2.2 TV Studio Cafeteria for Televisa, Mexico City

Figure (4.28) & (4.29):
Views of the cafeteria outside and inside the dining area
Figure (4.30):
Floor plan of the cafeteria indicating the relationship of the different areas

(4.28)

(4.29)

1 Plaza
2 Vestibule
3 Bar
4 Restroom
5 Dining Area
6 Kitchen
7 Offices
8 Deliveries
9 Terrace
10 Serving
11 Tray deposit

(4.30)

SPATIAL INTERCONNECTIVITY

TERRACE/DINING

RESTROOMS

BAR

DINING

TRAY DEPOSIT

SERVING   SERVING

ENTRANCE + EXIT   KITCHEN

DELIVERIES

OFFICES

(4.31)

CIRCULATION

TERRACE/DINING

RESTROOMS

BAR

DINING

TRAY DEPOSIT

SERVING   SERVING

KITCHEN

DELIVERIES

OFFICES

(4.32)
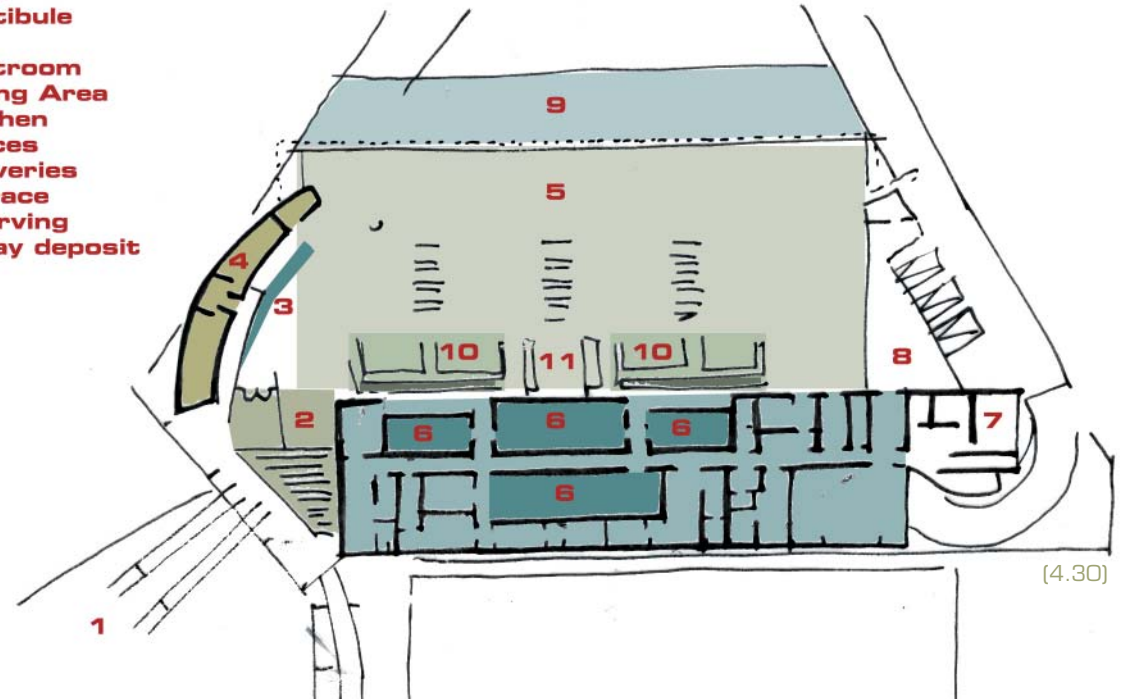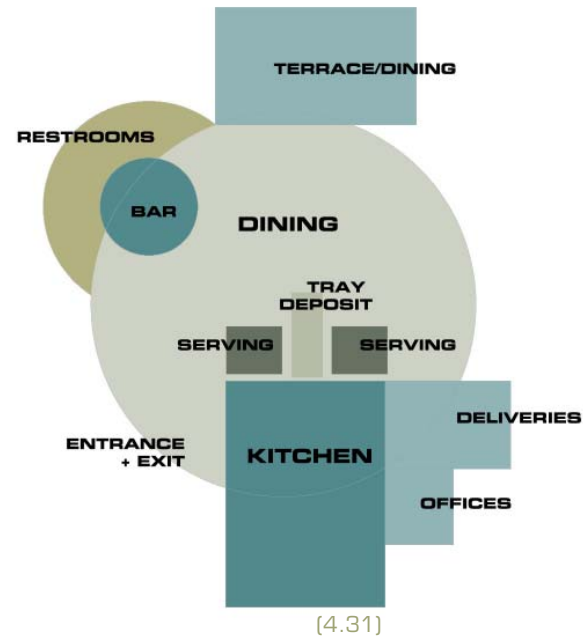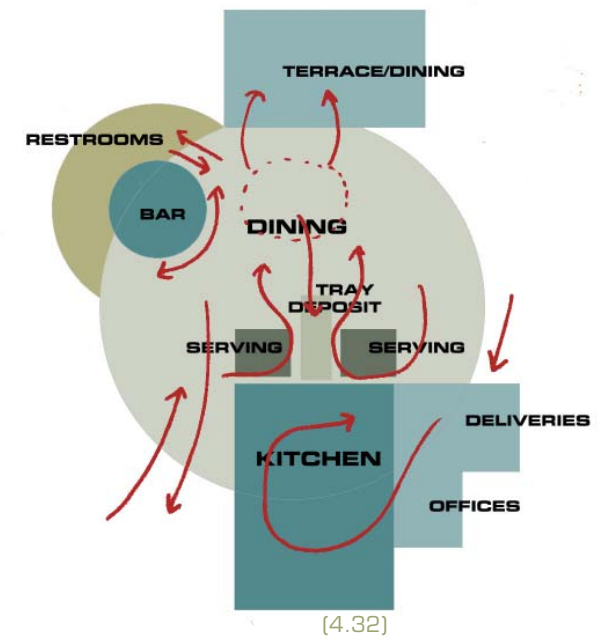
Figure (4.31):
Spatial interconnectivity
Figure (4.32):
Circulation diagram
Figure (4.33):
Diagram showing the circulation as a turn-around or circular approach

entrance   serving   dining

exit   tray deposit   (4.33)
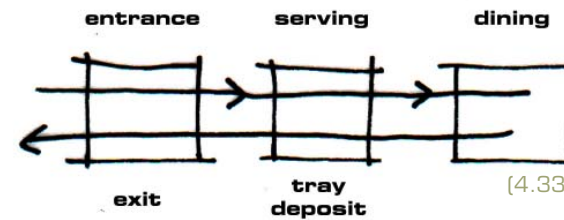
4.2.3 X-ray department at King Edward Memorial Hospital

Figure (4.34):
Spatial interconnectivity
Figure (4.35):
Circulation
Figure (4.36):
Ground floor plan of the x-ray department

(4.34)

(4.35)

(4.36)

(4.37)

(4.38)

National School of Theater, Mexico City, Mexico by Ten Arquitectos

The location of the National School of Theater has a unique set of contextual conditions. Two perpendicular highways on the northern and western edges, linked by a circular off-ramp, as well as a metro line, generate continual movements in front of the triangular corner site. The buildings contain three performance areas and their support facilities, rehearsal rooms, lecture halls, administrative offices, a cafeteria, a gym, scenography studios, costume design labs, and a library.

The various volumes are unified in a cylindrical shell, clad in curved steel panels, that creates an acoustic barrier from outside traffic and protects the building from the northern winds.

The spaces are organised as a series of stacked, individual volumes, unified by shared circulation and meeting spaces. The shell enclosure, supported by bent steel tubes held in tension by steel cables, also allows for covered terraces, performance, and event spaces, blurring the distinction between interior and exterior space.

Figure (4.37):
View from inside the cylindrical shell towards entrance
Figure (4.38):
Outside view towards building

Although the spaces are arranged in terms of their accessibility, the articulated forms represent a model of controlled disruptive order. This contradiction between random appearances and a calculated order creates a paradoxical dynamism among the enclosed forms.

(4.39)

(4.40)

positive space created between frame and building

(4.41)

positive space created
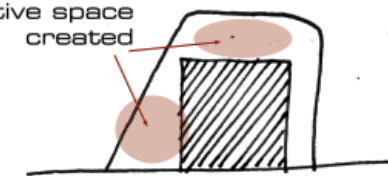
frame and building competes

(4.42)

Figure (4.39):
View from inside the cylindrical shell towards the entrance
Figure (4.40):
Outside view towards building
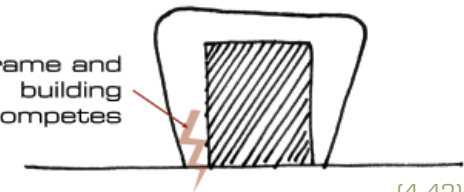
Figure (4.41):
Diagram showing the spatial relation between the frame and the building
Figure (4.42):
Concept sketches showing spatial relationship of the proposed design

undefined form

undefined form

undefined form

form cinfined by four lines

form defined by a simple line

form defined by a simple line

(4.43)

Figure (4.43):
Sketches illustrating the concept of definition
Figure (4.44) & (4.45):
In the abstract art, the line sometimes becomes the primary symbol of confinement and definition
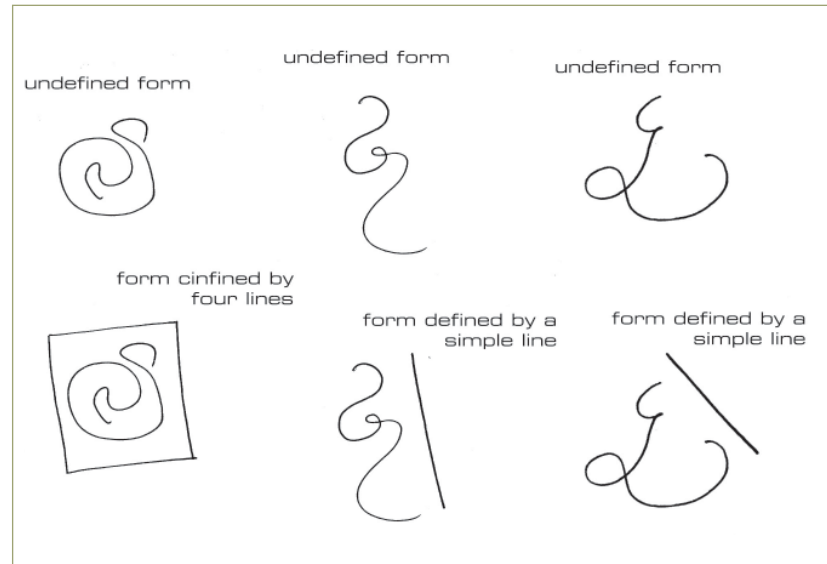
(4.44)
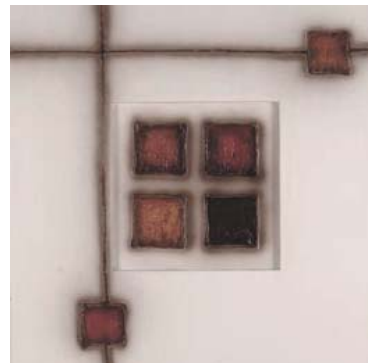
(4.45)

4.3.2 Confinement and Definition

The precedents in the next section illustrate the concept of confinement and definition of free forms and objects, by the use of simplified elements. Diagram (4.43) illustrate the concept. This principle was applied in the Villa Savoye, designed by Le Corbusier. As apposed to the informal arrangements of the interior, the external form is that of a pure prism. This pure geometry of the façade is entirely distinct from the practical considerations, but it confines the free forms used inside. Le Corbusier confirms this notion:

> 'My eyes see something that conveys an idea – an idea expressed not in words or sounds, but solely through prismatic forms, shapes clearly defined by light, which are related to each other. These relationships have nothing to do with practical functions or descriptive effects. They are the language of architecture. You not only have adapted raw materials to the functional requirements of a project but also, transcending these requirements, have established relationships that stir my emotions. That is architecture.' (Leupen, Grafe, Kornig, Lampe & Zeeuw 1997:116)

(4.46)

(4.47)

Rez-de-chaussée   Ground floor   Erdgeschoss

(4.48)
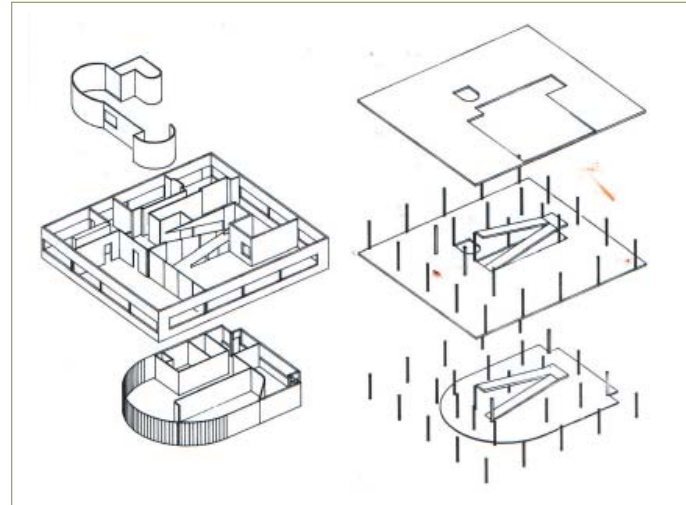
Figures (4.46):
Outside views of Villa Savoye
Figure (4.47):
Exploded views of partitions and structural elements
Figure (4.48):
Ground floor plan showing free forms of interior in
relation to the strict ordering of the columns
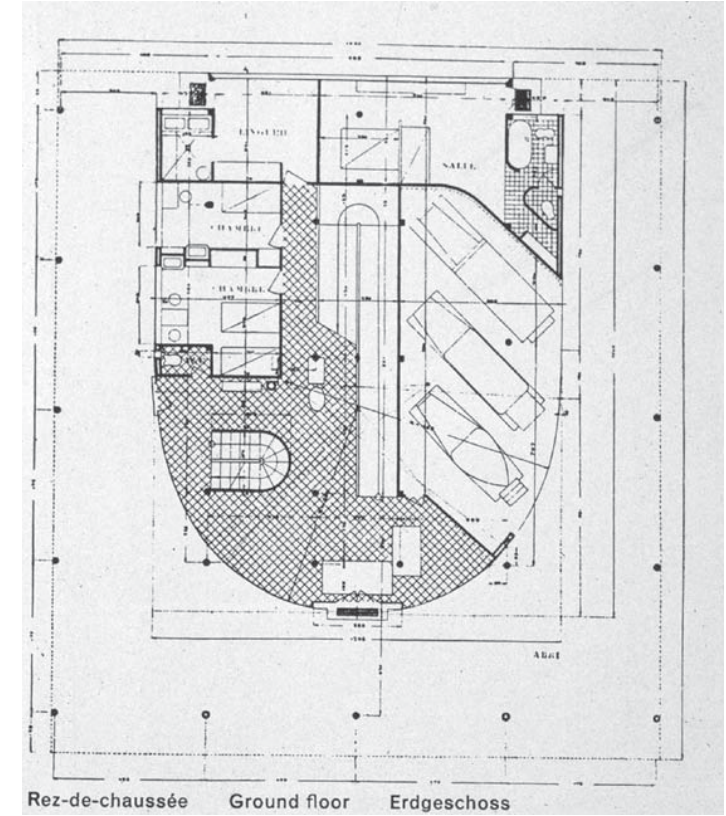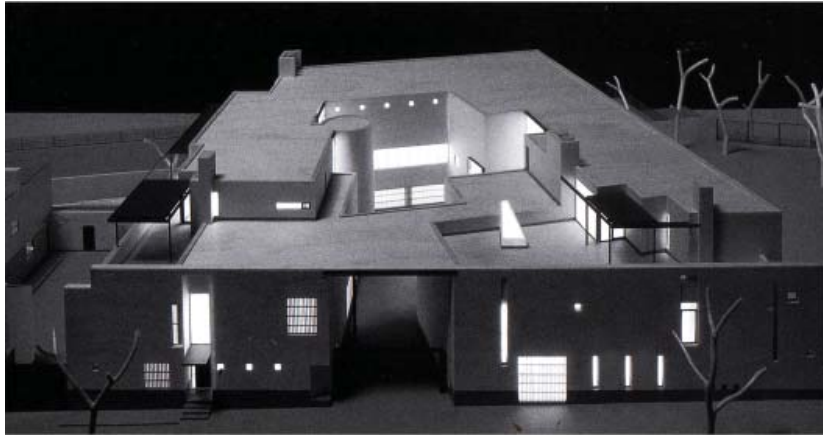
(4.49)
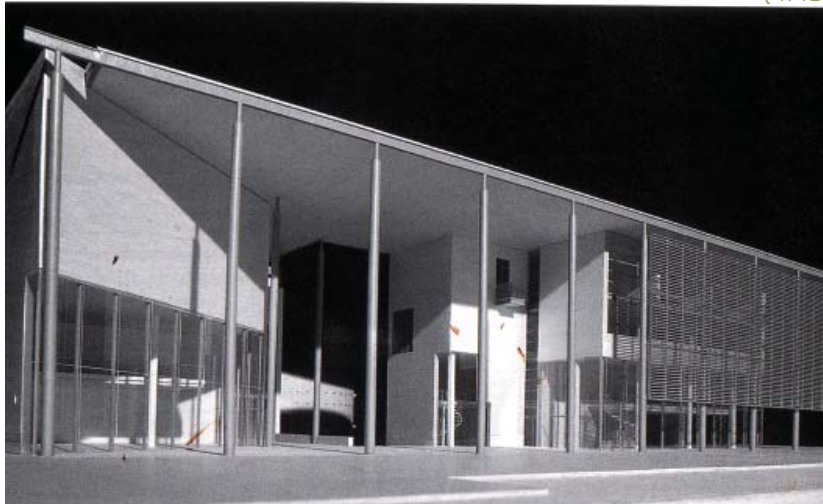
(4.50)

The work of Finnish architect Kristian Gullichsen also illustrates this concept: Build form and structure are being treated as relatively independent, although at the same time, it defines one other. (Figures 4.59 and 4.50)

Figure (4.49):
The embassy of Finland, Stockholm 1993
Figure (4.50):
University Library, Lleida, Spain, 1996

4.3.3 Pretoria Regionalism

The particular vernacular of Pretoria could be termed a third vernacular since there were two previous vernaculars in the history of South Africa, namely the Cape Dutch of the 18th century and the Georgian of the early 19th century (Fisher, Le Roux & Maré, 1998:122).

The Pretoria Regionalism had a particular way of responding to nature and the landscape through the use of natural and industrial materials with specific climatically responsive characteristics (ibid). The third vernacular is considered as a precedent mainly because of the consideration it gave to context in the design process.

The following aspects characterise Pretoria regionalism:

- Traditional plan-forms
- Rustic brick, either directly as clinker or as whitewashed stock
- Low-pitched iron roofs
- Deep shaded eaves and verandahs
- Sun-shy windows
- Sensitivity to landscape and land features
- An architecture responsive to climatic constraints

(4.51)

(4.52)

(4.53)

4.3.4 Environmental Elements

The confluence of science and art has fascinated environmental artist Ned Kahn throughout his career. For the last fifteen years, he has developed a body of work inspired by atmospheric physics, geology, astronomy and fluid motion. He strives to create artworks that enable viewers to observe and interact with natural processes.

His artworks frequently incorporate flowing water, wind, fog, sand and light to create complex and continually changing systems. Many of these works can be seen as 'observatories' in that they frame and enhance our perception of natural phenomena. Kahn is intrigued with the way patterns can emerge when things flow. These patterns are not static objects, they are patterns of behavior - recurring themes in nature.

Articulated Cloud - Pittsburgh Children's Museum, Pittsburgh: Composed of thousands of translucent, white plastic squares that move in the wind, the artwork is intended to suggest that the building has been enveloped by a digitized cloud. The optical qualities of the skin change dramatically with the weather and the time of day. The articulated skin is supported by an aluminum space frame so it appears to float in front of the building (figures 4.53 - 4.56). The design evolved through collaboration with the architects, Koning / Eizenberg.

(4.54)

(4.55)
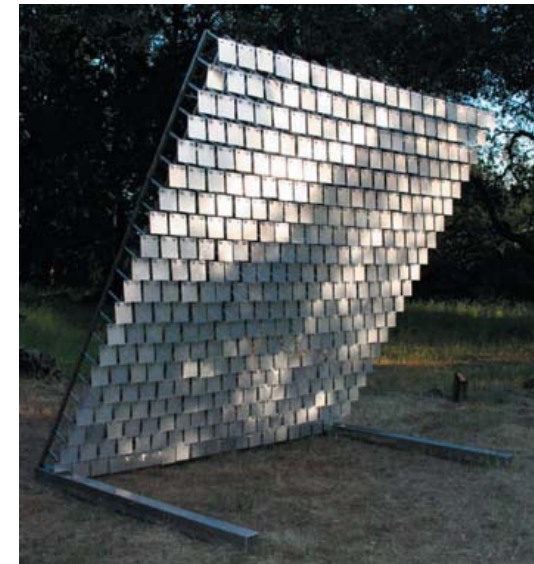
(4.56)

Fragmented Sea - Mesa Art Center, Mesa

A second wind-animated shade screen for the arts center is composed of thousands of blue-anodized, 3 inch square, aluminum flaps that move in the wind and create the illusion that the building has been submerged in a vertical sheet of rippling blue water (figure 4.57). As the blue- anodized flaps pivot in and out with the passing breezes they reflect different amounts of light from the sky, changing from deep blues when they are angled down to bright, light-blue glints when they catch the sun, with countless subtle shades of blue in between. The result is a blue-tinted, animation of the ever-changing patterns of the wind. A collaboration with BOORA and DWL Architects and the engineering firm Paragon.

(4.58)

(4.59)
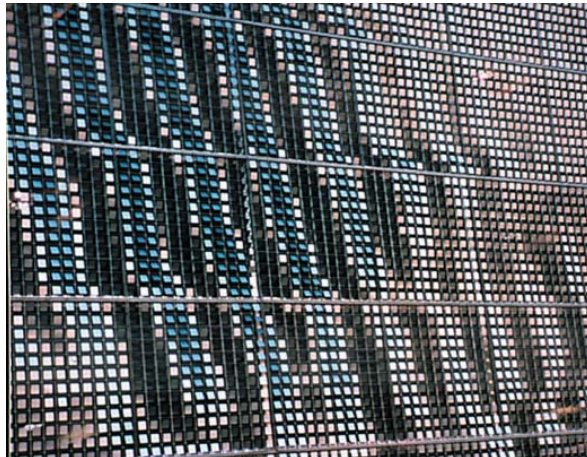
(4.57)

Figure (4.57):
Ned Kahn's 'Fragmented Sea'
Figure (4.58) & (4.59):
Prototype of Ned Kahn's work implemented in a building facade

(4.60)

Torre Agbar, Barcelona, Spain: In the work of French architect Jean Nouvel, sensitivity and specificity to context – cultural, geographical and architectural – becomes one of the defining themes. In this way, the environmental context played a significant part in the design of the Torre Agbar.

The building (figure 4.60) houses the headquarters for Aguas de Barcelona (Agbar), the municipal water company. The first skin that covers the concrete structure is a layer of polished aluminum in blues, greens, and grays. The second skin, which adds an iridescent sparkle to the building, is made up of 59,619 sheets of clear glass louvers, in 25 different colours. There are 4,400 windows accompanied by the louvers that tilt in various directions to block out any direct sunlight (figure 4.61). At night, the tower becomes yet more magnificent, with 4,500 yellow, blue, pink, and red lights illuminating the exterior.

The fritted louvers contribute to the energy performance of the building in two ways. They provide partial shade to the building's surface, and they create a ventilation space that allows heat to rise and escape before reaching the thermal envelope behind. The varying angles at which the louvers are affixed, and the varying degrees of frit intensity, contribute texture and change to this extraordinary surface.

Nouvel's approach also reveals some of the same atmospheric motions as seen in the work of Ned Kahn. 'The surface of this construction evokes the water,' Nouvel says, 'smooth and continuous, but also vibrating and transparent because it manifests itself in colored depths — uncertain, luminous, and nuanced.' (Logan: 2006)

Figure (4.60) & (4.61)
Torre Agbar view and facade
Figure (4.62):
Interior view of the aluminum skin
Figure (4.63):
View showing both of the two skins

(4.61)

(4.62)

(4.63)

Glen Murcutt: Murcutt is said to be Australia's most internationally famous architect and is known for his environmentally sensitive design. He pours his creativity into smaller projects that let him work alone and design economical buildings that will conserve energy and blend with the environment.

Murcutt chooses materials that can be produced easily and economically: Glass, stone, brick, concrete, and corrugated metal. He pays close attention to the movement of the sun, moon, and seasons, and designs his buildings to harmonise with the movement of light and wind.

(4.64)

(4.65)

Figure (4.64):
Magney House
Bingie Bingie New South Wales
Figure (4.65):
Simpson-Lee House
Mount Wilson New South Wales

5

TRANSFIGURE
Design Development

transfigure *vb* to change or cause to change in appearance;
to become more exalted

5.1_Influences of the design development

In 'Building Dwelling Thinking,' phenomenological philosopher Martin Heidegger discusses the notion of dwelling and contends that 'only if we are capable of dwelling, only then can we build' (Heidegger, 1971:160). A major problem with dwelling as a concept is its lack of specificity, particularly in terms of design significance. This chapter explores the possibility that the work of American architect Christopher Alexander, indicates ways in which Heidegger's dwelling can be translated into more grounded architectural meaning.

5.1.1 Dwelling and Building

In 'Building Dwelling Thinking,' Heidegger's major means of investigation is etymological: what is the word history of 'to build' ('bauen') and its links to dwelling? Bauen, says Heidegger, relates to nearness and neighborliness and also implies "to cherish and protect, to preserve and care for" (ibid: 147). Bauen also relates to the Old High German word for building, 'baun,' which means 'to dwell' in the sense of remaining or staying in place.

In emphasizing this link to place, Heidegger suggests that building relates to dwelling, which therefore can be said to involve a sense of continuity, community, and at-homeness (Harries, 1983). The crux of dwelling, Heidegger argues, is sparing and preserving - the kindly concern for land, things, creatures, and people as they are and as they can become (ibid: 149; Zimmerman, 1983). As human beings, we cannot fail to dwell, for dwelling, ultimately, is the essential existential core of human being-in-the-world from which there is no escape.

At the same time, dwelling is just as much a means as an end. There will always be a certain tension, a kind of imperfection, between what we wish, do, and make. The significant questions are how do we dwell in our own particular situations and how can we shape the quality of our dwelling for better or worse? Heidegger links the quality of our dwelling to the quality of our building, since an effective building arises from a genuine sense of sparing and preserving (Foltz, 1995:159-63).

Heidegger also argues that, in practical terms, dwelling involves the gathering of the fourfold - the coming together of earth, sky, people, and a sense of spiritual reverence, or 'the gods,' as he signifies higher realities (ibid.). In this sense, dwelling is no mere extension of existential space or place; rather, it becomes itself the fundamental human activity.

As Heidegger interprets dwelling, the built environment is crucial because it supports and reflects a person and group's way of being-in-the-world. The built environment is a certain embodied grasp of the world, a particular way of taking up the body and the world, a specific orientation disclosing certain aspects of a worldly horizon (ibid:154-155). The world in which we find ourselves completes us in what we are, and therefore the specific nature of the built environment becomes crucial.

Heidegger argues that, in our modern age, human dwelling is reduced and so, therefore, is building. His explication of why we dwell less fully today is complicated; he suggests that, in part, it is because we manipulate and demand from our world rather than meet it with an attitude of sparing and preserving, thus, allowing it to be and become. In this sense, a key to dwelling is letting ourselves and the world be, and this letting-be includes the ways we build, see, understand, and think.

It is this need for letting-be in designing and understanding that marks the value of Alexander's work for a deeper, more grounded, understanding of dwelling. Alexander seeks concrete means for identifying and describing built qualities that sustain and strengthen the quality of dwelling - providing ways to see and think more clearly, which, in turn, might lead to better designing and building.

5.1.2 Christopher Alexander and Pattern Language

This reconciliation between people and their built world is a major aim in the research and design of American architect Christopher Alexander. Alexander is very much concerned with architecture in its larger environmental context. In other words, how can activities, buildings, spaces, and landscapes are designed in an integrated, coherent way to create places that are coherent, beautiful, and alive for their residents and users? In short, the aim is place-making that sustains dwelling.

Alexander argues that, if an environmental whole is made rightly, it has a powerful sense of place, which may help people who live in and use that place to have more satisfactory, vibrant lives. In his work, Alexander seeks a way to return a sense of wholeness to the buildings and environments of modern Western society. He emphasizes that the crucial process is healing. Every new construction, whether building or square or street furniture or window detail, must be made in such a way as to heal the environment, where 'heal' especially means 'make whole.' The obligation is that the thing built must work 'to create a continuous structure of wholes around itself' (Alexander 1987:22).

The practical tool that Alexander developed to foster environmental wholes and healing is a 'pattern language' – a conceptual method whereby the designer can identify and visualize the underlying elements and relationships in a built environment that promotes a sense of place (Alexander 1987:ix). Alexander emphasizes, however, that successful places are always composed of many interrelated patterns that work synergistically to create a whole greater than the individual parts. Pattern language is not a master list of unchangeable design principles that must be incorporated in all buildings and places. Instead, it is a way of looking at and thinking about buildings and environments so that one can better understand how their parts might work together to create a whole. Design must be premised on a process that has the creation of wholeness as its overriding purpose, and in which every increment of construction, no matter how small, is devoted to this purpose (Alexander, Ishikawa & Silverstein 1977:16).

(Following page)
Figure (5.1) & (5.2):
Conceptual diagram showing the relationship between the different subcultures and where they meet
Figure (5.3) & (5.4):
Concept illustrated on city and site scale

hundreds of different subcultures

where subcultures meet

subculture boundaries

(5.1)

different subcultures

subculture boundaries
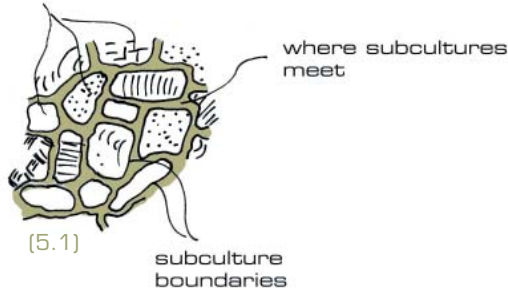
where subcultures meet
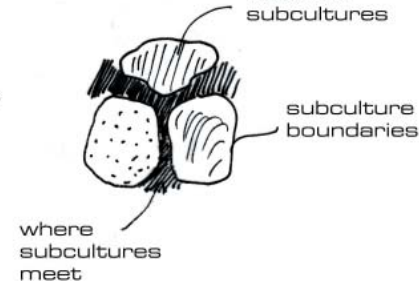
(5.2)

different subcultures

inner city
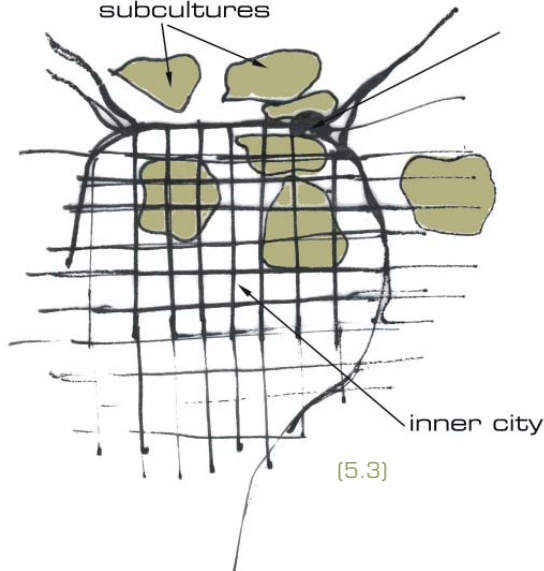
(5.3)

transport interchange: where subcultures meet

different subcultures
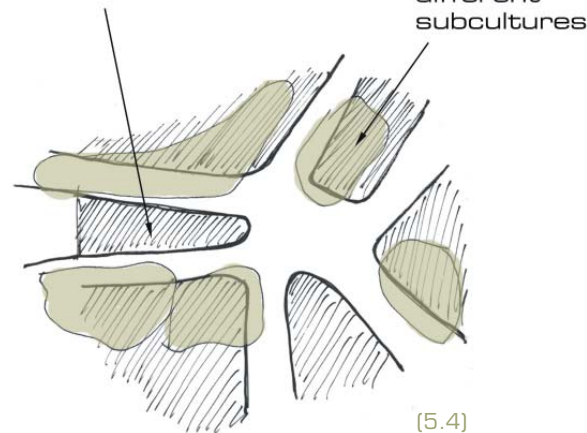
(5.4)

5.1.3 Developing a Pattern Language

The following patterns where chosen as design tools and applied during the design development:

Pattern 8: Mosaic of Subcultures

The city is a landscape of cultural diversity and subcultural differentiation, thus, a mosaic of social worlds. This great variety of human groups co-existing together seems rich, but the modern city dampens all significant variety and encourages conformity. According to Alexander this homogeneous and undifferentiated character kills the richness of variety of life styles and the growth of individual character (Alexander, Ishikawa & Silverstein 1977:43). He therefore suggests that these cultures and subcultures be enriched by breaking the city into a vast mosaic of spatial territories. (ibid.) However, there are still areas - beyond the boundaries of these subcultures, within the interstices - where people have access to the full diversity of lifestyles. The transport interchange is such vicinity. The proposed design therefore aims to accommodate all styles and cultures, irrespective of the locality.

Pattern 16: Web of public transportation

As mentioned in chapter 2, the system of public transportation within the city, can only work if all the parts are well connected. The traditional way of looking at public transportation assumes that the lines are primary and that the interchanges needed to connect the lines to one another are secondary. Alexander proposes the opposite: namely, 'that interchanges are primary and that the transport lines are secondary elements…' (ibid:93) This approach redefines the importance of the transport interchange.

(5.5)

(5.6)
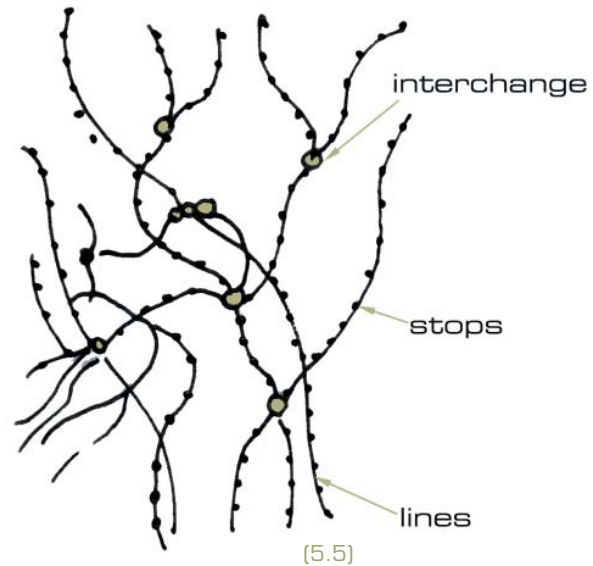
Figure (5.5):
Conceptual diagram showing the relationship between interchanges, stops and lines
Figure (5.6):
Interchanges, stops and lines illustrated as concept within the CBD of Pretoria
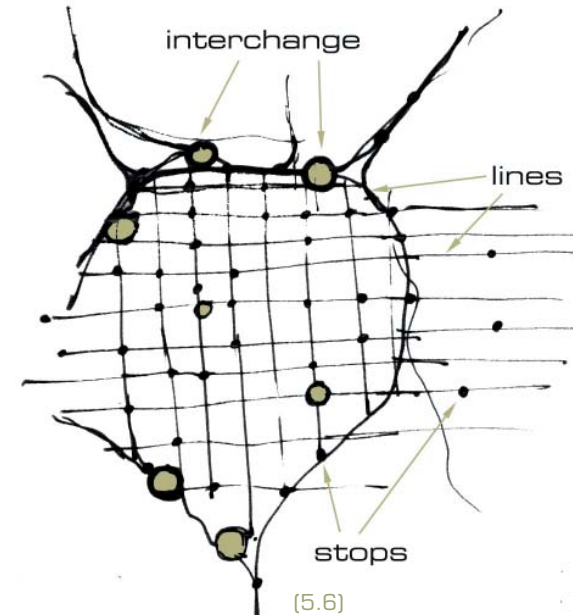
(Following page) Figure (5.7) & (5.8)
Sketches illustrating the concept of the four storey limit
Figure (5.9):
Section through the design intervention

Pattern 21: Four storey limit

High buildings have no genuine advantages, except in speculative gains for banks and land owners. They are not cheaper, they do not help create open space, they destroy the townscape, they destroy social life, they promote crime, they are expensive to maintain, they wreck the open spaces near them, and they damage light and air and view. But apart from this, which shows that they aren't very sensitive, empirical evidence shows that they can actually damage people's minds and feelings. (Alexander, Ishikawa & Silverstein 1977:115)

The density of building fluctuates within the urban area. Generally it will be higher towards the center and lower towards the edges. As the site lies on the periphery of the inner city,

it is not subjected to being a skyscraper. The above problem statement introducing the pattern has a simple explanation: high-rise living takes people away from the ground, and away from the casual, everyday society that occurs on the sidewalks and streets. This individual isolation causes social breakdowns.

At three or four stories, one can still walk comfortably down to the street, and from a window you can still feel part of the street scene. Alexander argues that in both housing and offices buildings, the problems begin when buildings are more than four stories high. (ibid: 118) At less than four stories, you can see

detail in the street – the people, their faces, shops. From these stories you can yell out, and catch the attention of someone below. Above four stories these connections break down. Visual detail is lost; the connection to the ground and to the fabric of the city becomes tenuous. The building becomes a world of its own.

The architectural intervention will therefore be limited to three stories, with the additional use of the roof. This will ensure interaction and the proper connection between building height and the users.

no interaction between building and street

five storey or more (5.7)

interaction and connection between building and street possible

four storey or less (5.8)

interaction from upper floors

ROOF GARDEN

OFFICES

CAFE

SHOP

interaction from upper floors

PARKING BASEMENT

(5.9)
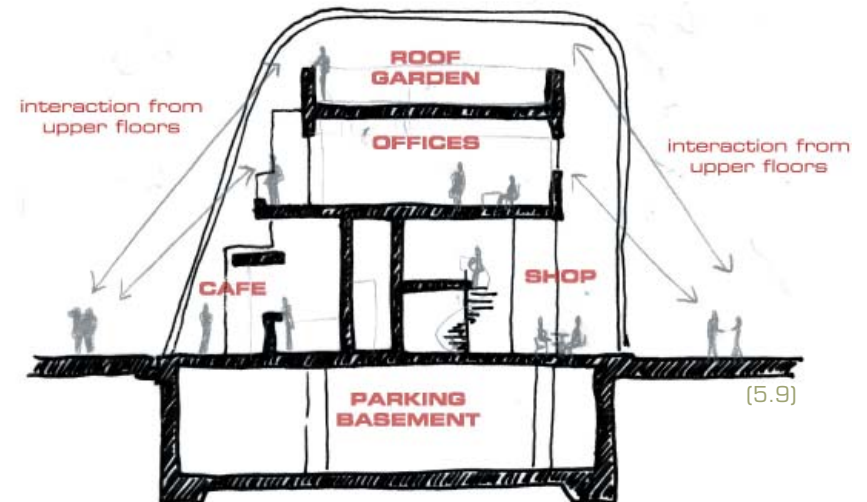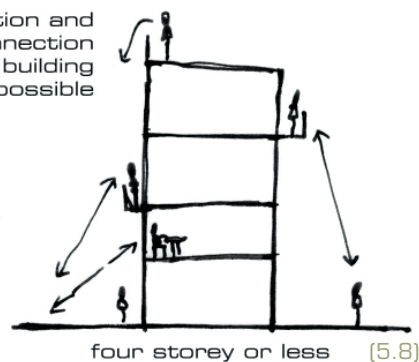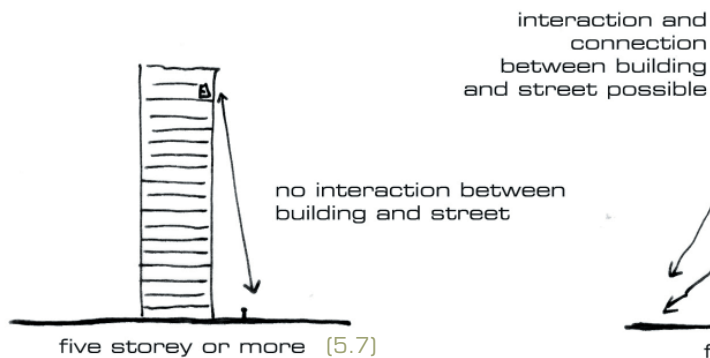
Pattern 30: Activity nodes

One of the greatest problems within the urban environment is the lack of open public space. Available public life in cities is spread so thin that it has no impact on the community. Studies of pedestrian behaviour make it clear that people seek out concentrations of other people, whenever they are available. (Alexander, Ishikawa & Silverstein 1977:164) Also, due to the fractured nature of South African cities, community facilities are scattered individually through the city and do not work for the life of the city. To address this problem, Alexander suggest that facilities be grouped together densely round very small public squares which can function as nodes. (ibid.) All the pedestrian movement must also be organized to pass through these nodes. (ibid:165)

The intersection at Bloed and Boom Street is an important spot where action seems to concentrate itself. The next step would then be to modify or adjust the layout of the paths in the community to bring as many as possible of them through this interchange. The interchange will then function as a 'node' in the path network, Alexander (1977:167) further proposes that the center of each node be developed as a small public square, with

a combination of shops and facilities which are mutually supportive. In this case, the Boom Street intersection will be treated as a 'public square' itself. It is suggested that the corner of each site be treated as open public space, with the supportive facilities and shops adjacent to the immediate building. This will be implemented within the design intervention.
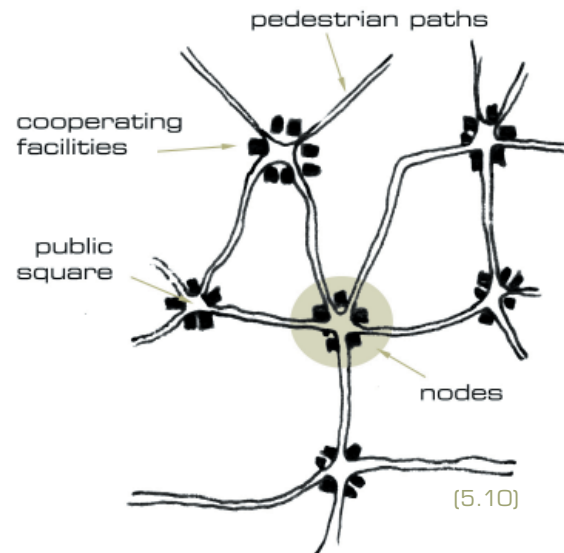
Figure (5.10):
Pedestrian routes to pass through public nodes

(5.10)

cooperating facilities

pedestrian paths and roads

interchange acting as open public space

nodes

(5.11)

node on the interface of the inner city

node

the interchange itself becon a public open space

corners of each site left open, acting as 'relief zone' and open public space

(5.12)
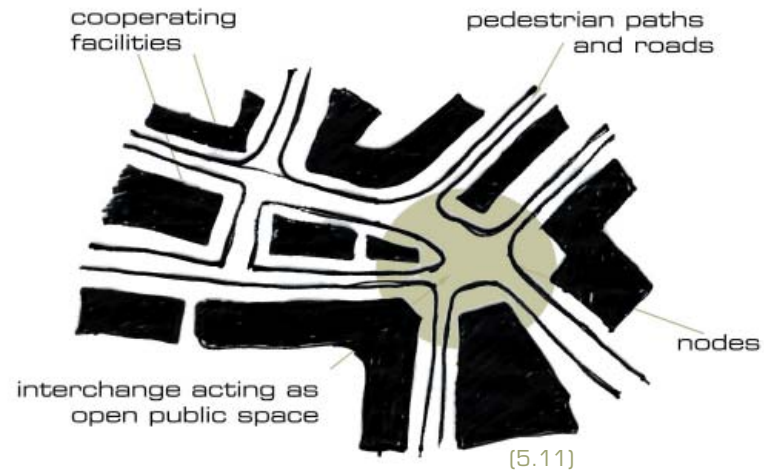
Figure (5.11):
The intersection itself will be treated as a public node
Figure (5.12):
Drawing illustrating how, by treating the corners of each site as open space, will contribute to the node as successfull public space
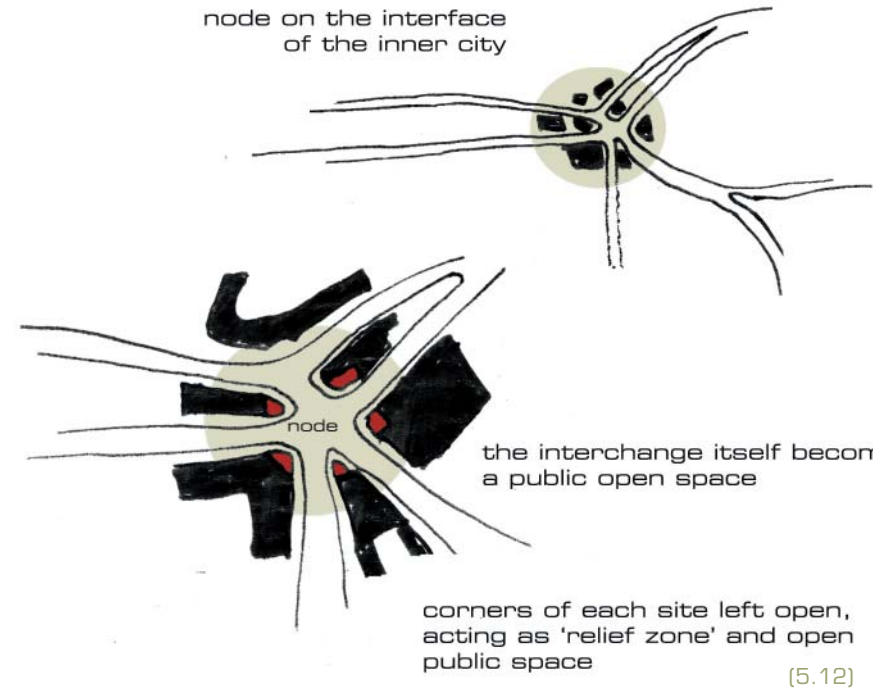
Pattern 33: Night life

Most of the city's activities close down at night; those which stay open won't do much for the night life of the city unless they are together. (Alexander, Ishikawa & Silverstein 1977:180)

Alexander's argument suggests small, scattered centers of mutually enlivening night spots, where the services being grouped together to form cheery square, with lights and places to loiter (Alexander, Ishikawa & Silverstein 1977: 180-182). The intervention, being multi-functional with facilities varying from dining to overnight accommodation, will easily function as a small group of sustaining night facilities.

Figure (5.13) & (5.15): Sketches illustrating the concept intervention
Figure (5.14): Potential night spots centered around dining facilities

lights

lights

clustered evening establishments

(5.15)

clustered evening establishments

lights

(5.13)

CAFETERIA PATIO

CORNER CHOP/CAFE WITH OUTSIDE SITTING

OUTDOOR SITTING RESTAURANT

(5.14)
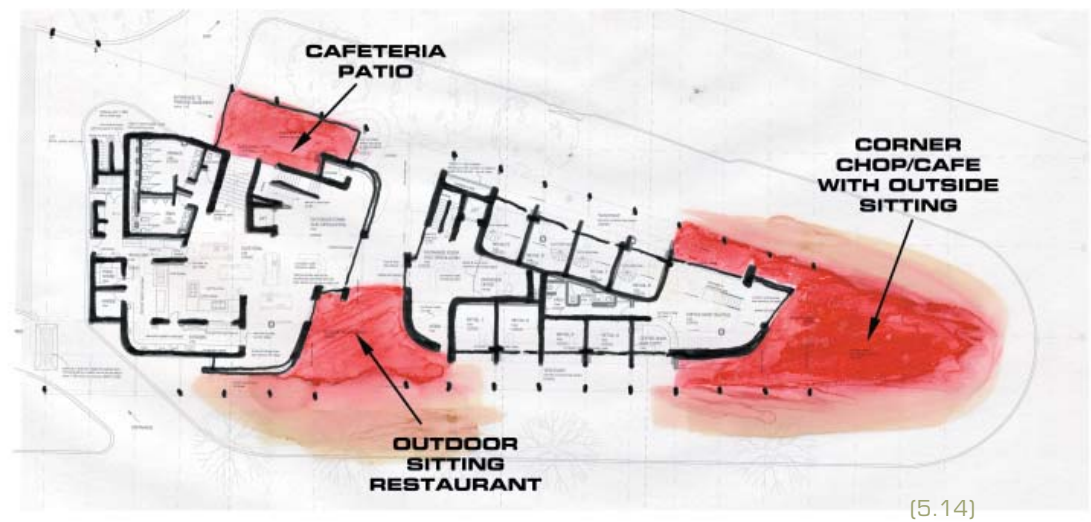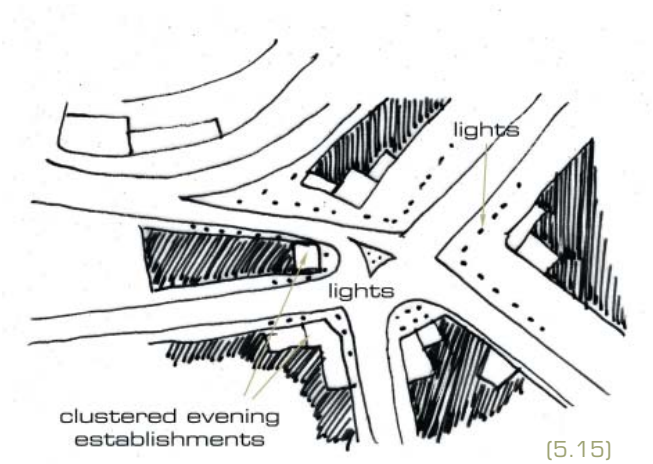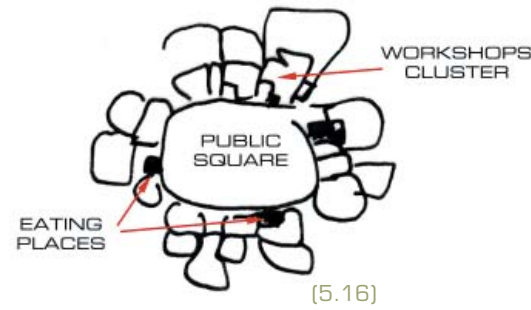
Figure (5.16):
Alexander's concept illustrating a work community
Figure (5.17):
Section through the building showing the different uses
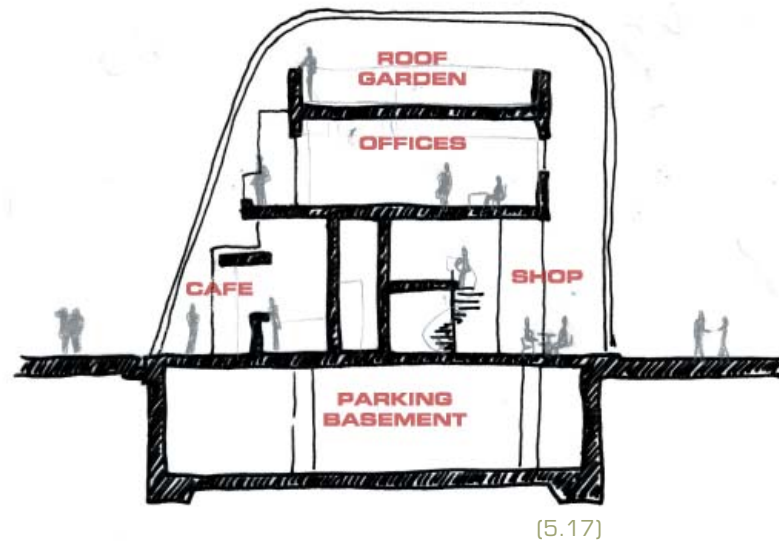
Pattern 41: Work community

With this pattern Alexander challenges the work environment, as being part of where en how we live. According to him, the people of our culture believe that they are less alive when they are working than when they are at home (Alexander, Ishikawa & Silverstein 1977:223). The word 'live' applies to every moment of our waking lives. By making this distinction, we settle for a work environment less part of our lives and 'alive'. The work environment created within the intervention becomes part of the energy and activity of the intersection and vibrant transport interchange.

Pattern 47: Health center

This pattern runs hand-in-hand with the problem statement (chapter 2) and forms part of one of the main functions of the intervention. Alexander states it clearly:

> Hospitals put the emphasis on sickness. They are enormously expensive; they are inconvenient because they are to centralized; and they tend to create sickness, rather than cure it… (Alexander, Ishikawa & Silverstein 1977:252)

A system of healthcare which is actually capable of keeping people healthy must put its emphasis on health, not sickness. It must therefore be physically decentralized so that it is as close as possible to people's everyday activities. The transport interchange therefore becomes the ideal spot for the proposed TB testing site. It must also be able to encourage people in daily practices that lead to health, which is exactly what the incentive of the cafeteria is.

(5.18)

(5.19)

MUNICIPAL CLINICS
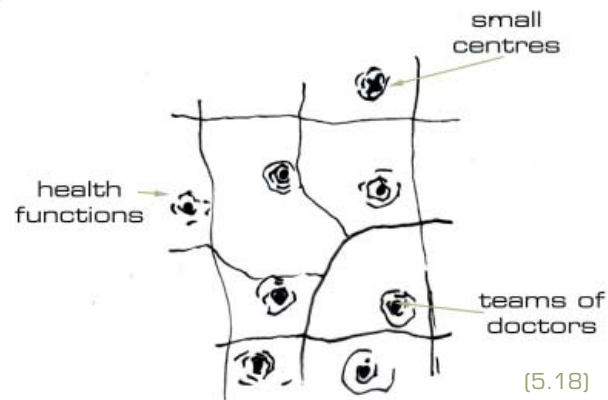
HOSPITALS/CLINICS

Figure (5.18):
Alexander's illustration on the concept
Figure (5.19):
Location of municipal clinics and hospitals around the CBD of Pretoria

Pattern 88: Street café

(5.20)

People enjoy mixing in public, whether in parks, squares, promenades or avenues. The street café also provides a unique setting where people can sit lazily, legitimately, be on view, and watch the world goes by (Alexander, Ishikawa & Silverstein 1977:437). Alexander (ibid: 438) concludes that the ingredients for a successful street café seem to be:

1. The café must be anchored within the neighbourhood, with an established local clientele. As the intervention is located next to the transport interchange, the same people using public transport on a daily basis will become the main clients of the proposed street café.

2. In addition to the terrace which is open to the street, the café must contain several other spaces which will encourage a variety of people to start using it (figure 5.20). The proposed cafeteria and the café each have different areas which will accommodate the different social styles.

3. The café must serve simple food and drinks – but is not a bar. It must be a place which you will be likely to go in the morning to start the day, as in the evening for a nightcap. Due to its location next to the taxi rank, the cafeteria and the café on the corner will be used very early in the morning as well as late at night.

(5.21)

(5.22)
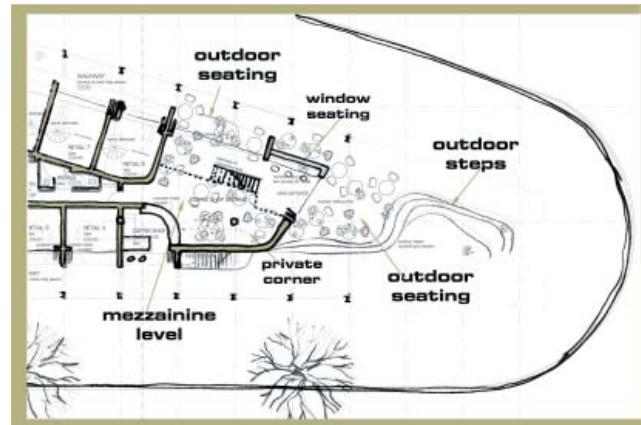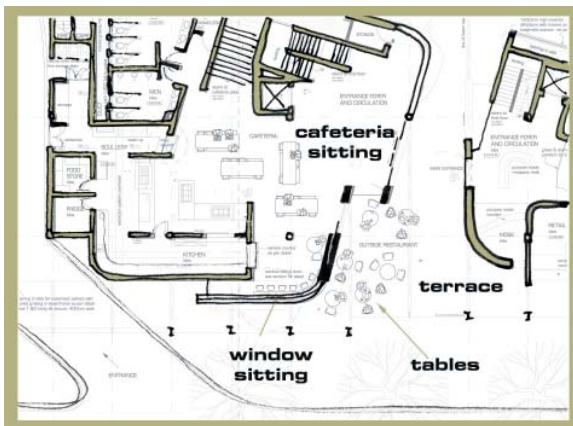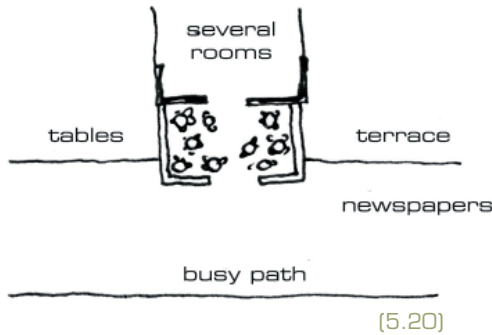
Figure (5.20):
Sketch illustrating the concept of the street cafe
Figure (5.21) & (5.22):
Sketch plans indicating the various different spaces within the cafeteria dining area and corner cafe

Pattern 92: Bus stop

> Bus stops must be easy to recognize, ad pleasant, with enough activity around them to make people comfortable and safe. (Alexander, Ishikawa & Silverstein 1977:452)

Bus stops are often set down independently, with very little thought given to the experience of waiting there. The relationship between the bus stop and the surroundings must be carefully considered. Bus stops must be designed in such a way that they form tiny centers of public life. Within the proposed design, the bus stop is part of the transport interchange and will also work together with several other activities for example outdoor shelter, seats, the corner café and a newsstand.

bus waiting near entrance with steps as seating

propased new bus stop

bus waiting next to cafe

bus waiting next to cafe

bus waiting next to kiosk

bus waiting near entrance with bench as seating

(5.24)

hot coffee

newspaper stand/kiosk

walkway

bench

street

(5.23)
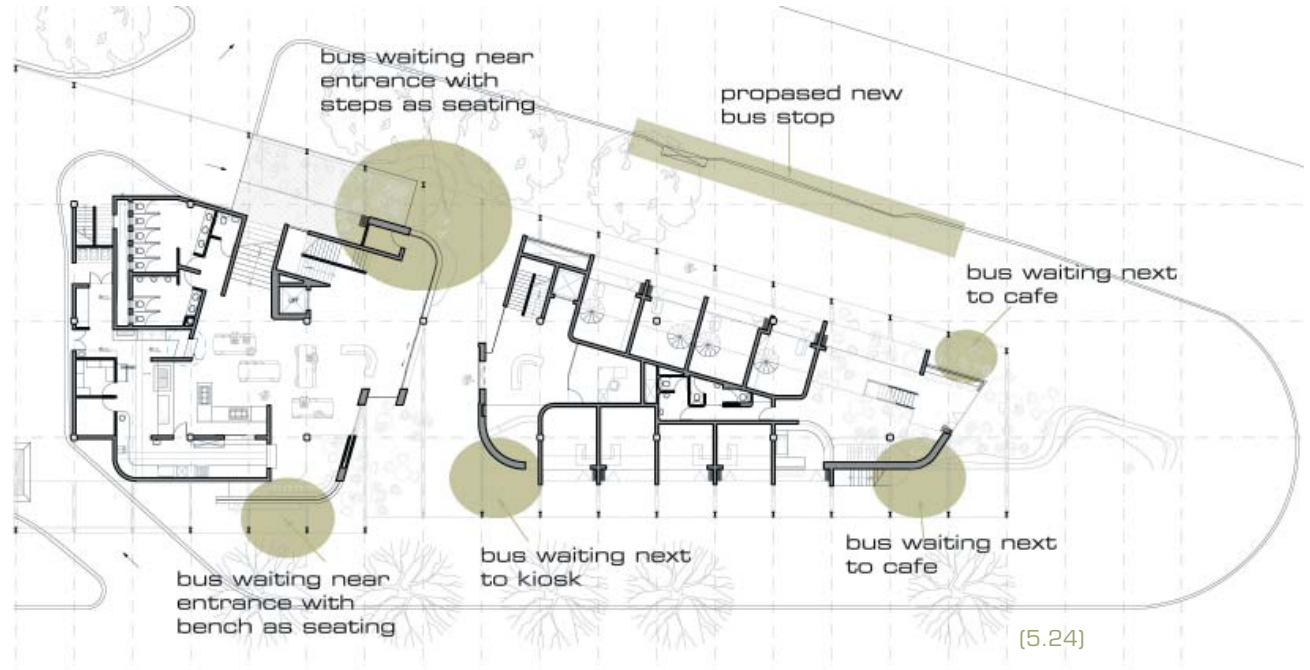
Figure (5.23):
A pleasant bus stop with activities around
Figure (5.24):
Location of potential bus stops in the design intervention, incorporated with additional facilities

(5.25)

seperate buildings each with
seperate components

(5.26)

Pattern 95: Building complex

Alexander argues that a building is a visible, concrete manifestation of a social group or social institution (Alexander, Ishikawa & Silverstein 1977:469). And just as every social group has smaller groups within it, a human building will also reveal itself as a complex of smaller institution. Alexander feels that the more monolithic a building is, the more it presents itself as in-human. The one example he uses, was also used by the author in the precedent of the Contitutional Court of South Africa, namely that of the African hut. A group of huts is 'human' too, because it is a complex of buildings, not one huge building by itself. Alexander suggests that whenever possible, a building program must be translated into a building complex, whose parts also manifest the actual social facilities of the situation (ibid: 476). The following diagram illustrates Alexander's concept (figure (5.27):

Figure (5.25):
First concept sketches exploring building complex footprint
Figure (5.26):
Final building footprint

one building with
identifiable parts

collection of small
buildings

social components

(5.27)
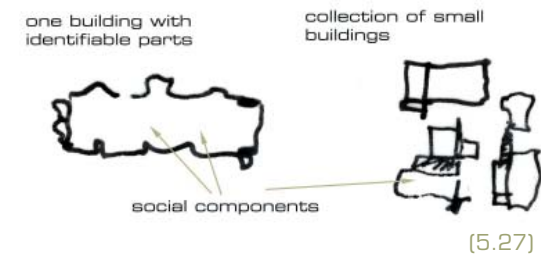
Pattern 97: Shielded parking

Large parking structures full of cars are inhuman and dead buildings – no one wants to see them of walk by them. At the same time, if you are driving, the entrance to a parking structure is essentially the main entrance to the building – and it needs to be visible. (Alexander, Ishikawa & Silverstein 1977:478)

Alexander's solution to this problem is to put all parking lots or parking garages behind some kind of natural wall, so that the cars and parking structures cannot be seen from outside. However, if the parking garage is a parking basement – as within the case of the intervention – this is very easy to achieve. The difference comes in the fact that the main entrance to the building is not through the parking garage as within Alexander's example, but from the street. The entrance to the parking garage would therefore be rather hidden behind structures or walls. This is achieved by using the existing basement entrance of the taxi rank as the entrance to the intervention's parking garage. See figure 5.28.

exit into Boom Street

EXIT

one way

entrance to parking basement of proposed design

entrance to basement taxi rank

ENTRANCE

one way

(5.28)
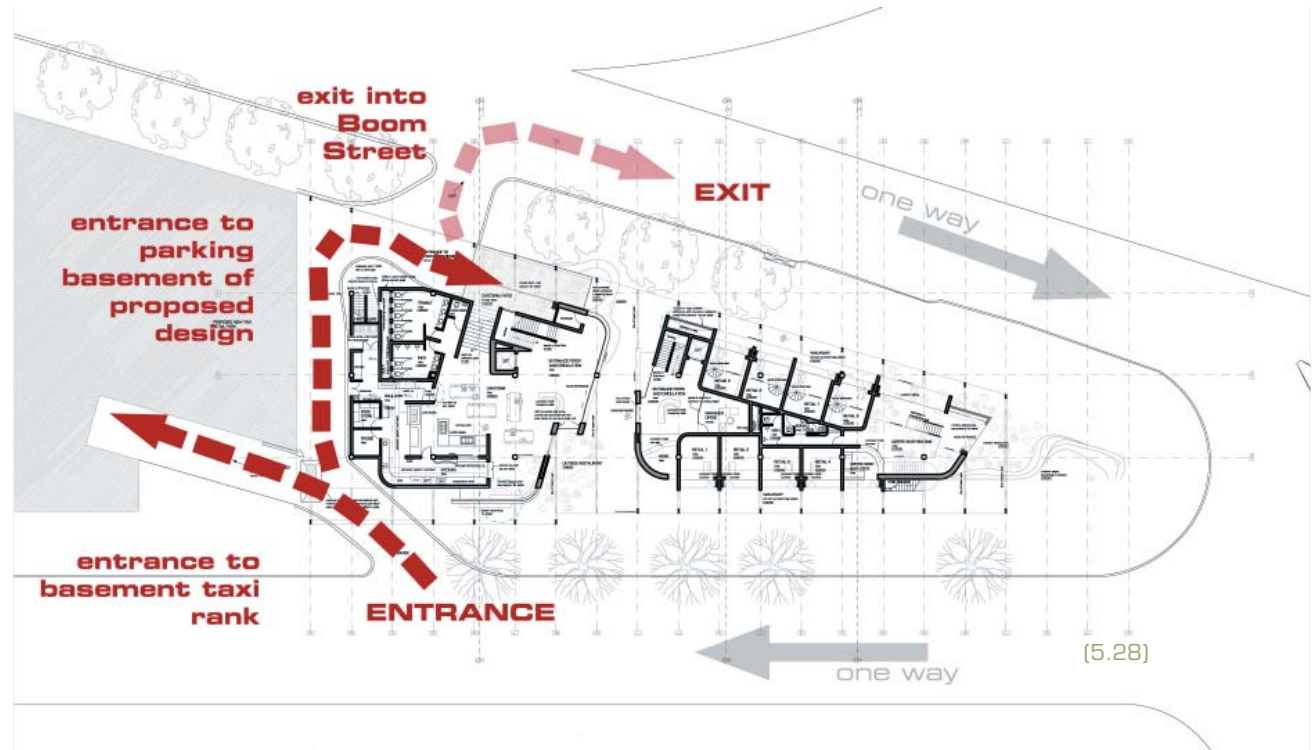
Figure (5.280):
Entrance and exit indication
Figure (5.29) & (5.30):
Concept sketch explaining shielded parking

shield

parking enclosure

parking gates

(5.29)

example of a shielded parking structure (5.30)

Figure (5.31)
Concept sketches 1 to 3 illustrates the responsive design bulk form generated from the constraints and possiblilites derived from the site analysis. Concept 3 would maximize on-street interaction and the genera-tion of a pedesri-an street

open space on the street front in direct contact with sidewalk

buildings centrered in relationto the site

concept 1

buildings on periphery to motivate interaction between building and sidewalk

open space centrered

entrances treated as public pockets

concept 2

site too narrow for open space between buildings

public pockets

people from sidewalks and adjacent buildings

concept 3

(5.31)

Pattern 100: Pedestrian street

In today's societies, the social intercourse created when people rub shoulders, and the actual process of movement is now taken place in indoor corridors and lobbies, inside malls, instead of outdoors. This robs the street from people and the streets become abandoned and dangerous. Even the new Taxi Retail Park next to the design intervention is developed as a mall with a range of shops only accessible from the inside. This encouraged the author to approach the intervention different, forcing people to use the sidewalks and open air walkways rather than the inside lobbies and corridors. To create the social intercourse of public movement, as far as possible, the movement between rooms, offices, departments, buildings within the building complex, must also be outdoors, on sheltered walks, arcades, paths and streets.

Alexander concludes: 'Arrange buildings so that they form pedestrian streets with many entrances and open stairs directly from the upper stories to the street, so that even movement between rooms is outdoors, not just movement between buildings' (Alexander, Ishikawa & Silverstein 1977:490).

Pattern 102: Family of entrances

When a person arrives in a complex of offices or services, there is a good change he will experience confusion unless the whole collection is laid out before him, so that he can see the entrances of the place where he is going. This principle was mainly applied in the TB testing facility, as for the different departments must be clearly visible to avoid confusion (figure 5.32). Alexander proposes that the entrances be laid out as to form a family, meaning they form a group; are visible together and each is visible from all the others.

reception nodes
(5.32)

(5.33)

family of entrances
(5.34)
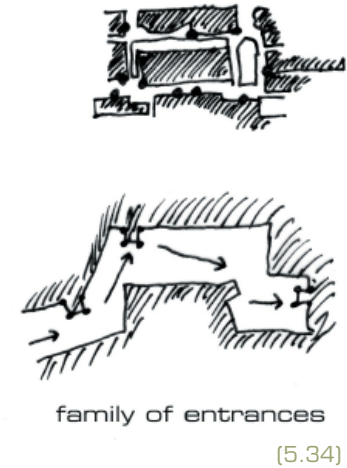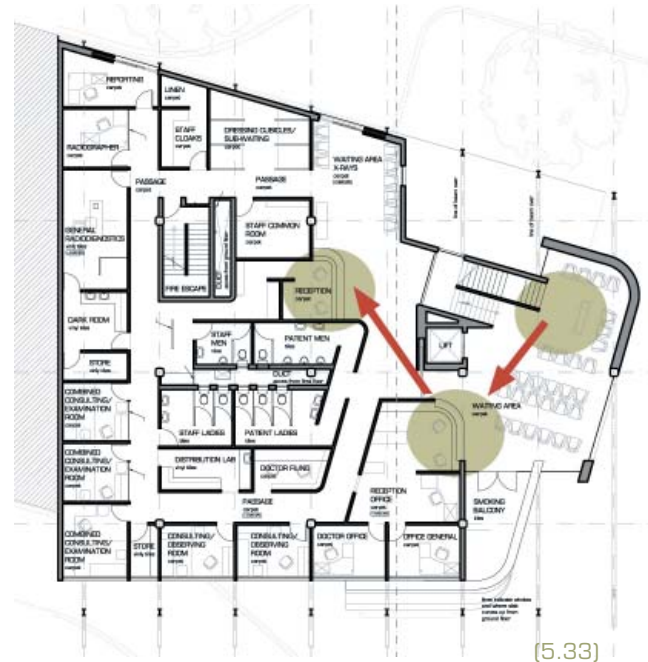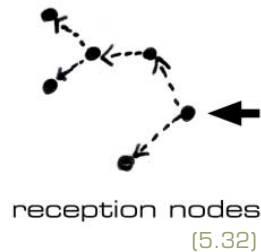
Figure (5.33):
Relation between the entrance and receptions on first floor

open space vague and undefined (5.35)

open space that is destinct, can be felt (5.36)
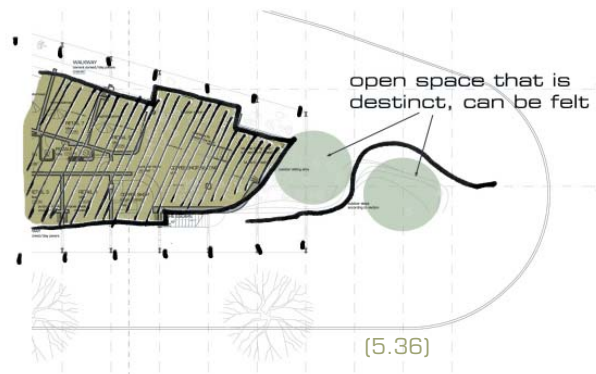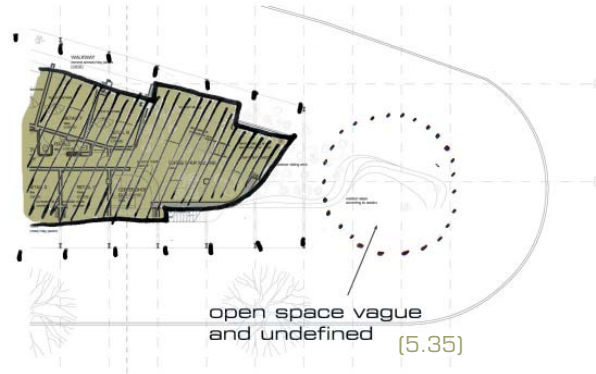
Figure (5.35), (5.36) & (5.37): Sketch illustrating open undefined space versus defined space

enclosure generated by steel frame

outdoor steps

enclosure generated by steps for outdoor seating

(5.37)
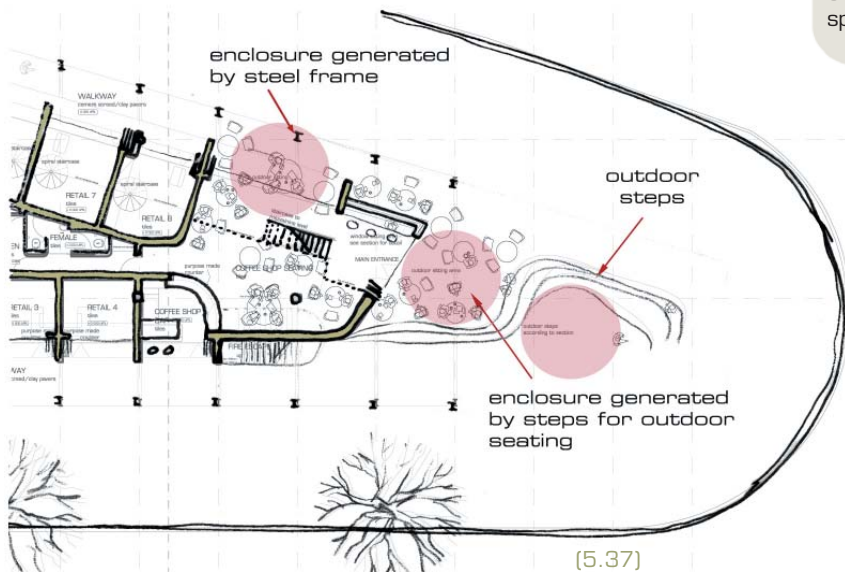
Pattern 106: Positive outdoor space

Outdoor spaces which are merely 'left over' between buildings will, in general, not be used. (Alexander, Ishikawa & Silverstein 1977:518)

There are two fundamentally different kinds of outdoor space: negative space and positive space. Alexander describes negative outdoor space as shapeless, the residue left behind when buildings – which are generally viewed as positive – are placed on the land. Accordingly, outdoor space is positive when it has a distinct and definite shape, and when its shape is as important as the shapes of the building which surround it (Alexander, Ishikawa & Silverstein 1977:518). The open space in the corner of the site will be given some degree of enclosure by treating it with steps on which people can sit and relax. See figures 5.35 to 5.28.

steps creating enclosure

Steps and enclosure (5.38)
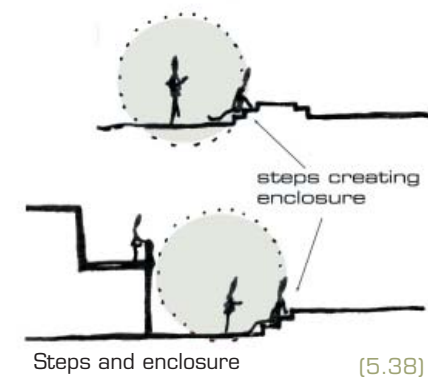
Pattern 110: Main entrance

Placing the main entrance(s) is perhaps the single most important step one takes during the evolution of a building plan. Alexander (1977:540) feels that the position of the main entrance controls the layout of the building. This was indeed experienced by the author during the design process. It controls the movement to and from the building, and also all the other decisions about the layout and flow. The following sketches indicate the design development of the entrance, being inseparable from the shape of the building. (figures 5.40 and 5.41)

possible main entrances

(5.40)

(5.41)

visible from lines of approach

(5.39)
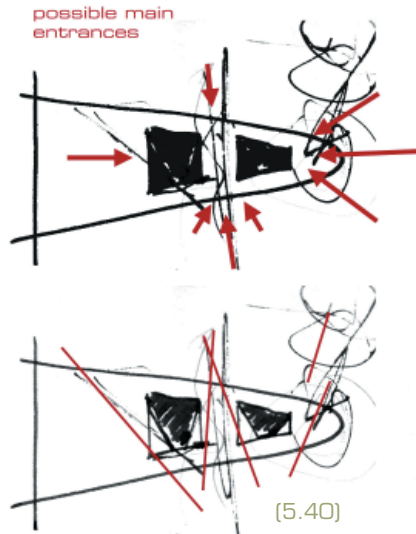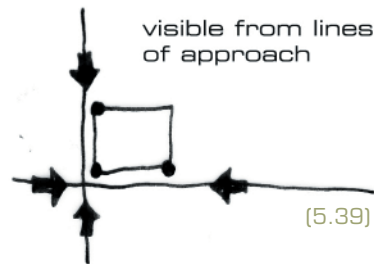
Figure (5.39):
Alexander's illustration of the concept
Figure (5.40) & (5.41):
Sketches showing the design development of the entrance

view

change of
direction

transition
space

(5.42)

Figure (5.42):
Alexander's concept of the entrance transition
Figure (5.43):
Sketch showing the transitional entrance of the design intervention
Figure (5.44)
Sketches showing the first concept of 'shelter' as being used in the design investigation

Pattern 112: Entrance transition

The experience of entering a building influences the way you feel inside the building (Alexander, Ishikawa & Silverstein 1977:548). If the transition is too abrupt there is no feeling of arrival, and the inside of the building fails to be an inner sanctum (figure 5.42). As discussed previously in this dissertation, the author explored the transition from 'outside' to 'inside' with the possibility of working with an additional skin which will present the 'in-between'. This will then enrich the experience between the street and the enclosure of the building. Within this transitional space, the change of light, the change of sound, the change of direction, the change of surface will all be ways in which this pattern can be investigated.

change in direction

main
entrance

main
entrance

transition space

(5.43)

street

Pattern 117: Sheltering roof

This is perhaps the pattern which comes closest to the essence of this dissertation. Challenged with the notion of dwelling and our 'being' in the world, the concept of 'shelter' becomes part of the debate whether we as humans reflects the ideal way of this being.

concept

roof as
secondary skin

building as
primary shelter

(5.44)

The roof in this instance plays a primal role in our lives. The most primitive buildings are nothing but a roof. Alexander (1977:570) argues that if the roof is hidden, if its presence cannot be felt around the building, or if it cannot be used, then people will lack a fundamental sense of shelter. This sheltering function cannot be created by a roof which is merely added to the top of an existing structure. The roof itself only shelters if it contains, embraces, covers and surrounds the process of living (ibid.). It is in this sense that the space under or on the roof becomes useful space; space that people come into contact with daily. The whole feeling of shelter comes from the fact that the roof surrounds people at the same time that it covers them. Implementing the pattern within the design intervention becomes the most dramatic feature of the building. The additional skin the author worked with, takes on the function of the roof as secondary shelter while simultaneously defines a space which includes living space within its volume, not only underneath it. The sketches on the left is ealry concepts exploring this feature.

(5.45)

(5.46)

(5.47)

Figure (5.45), (5.46) & (5.47):
Early concept sketches exploring the roof as enclosure

planters and trees

roof garden

smoking
balcony

(5.48)

section through
office block

planters and trees

roof garden

planters and trees

youth hostel
balcony

(5.49)

section through
youth hostel & cafeteria
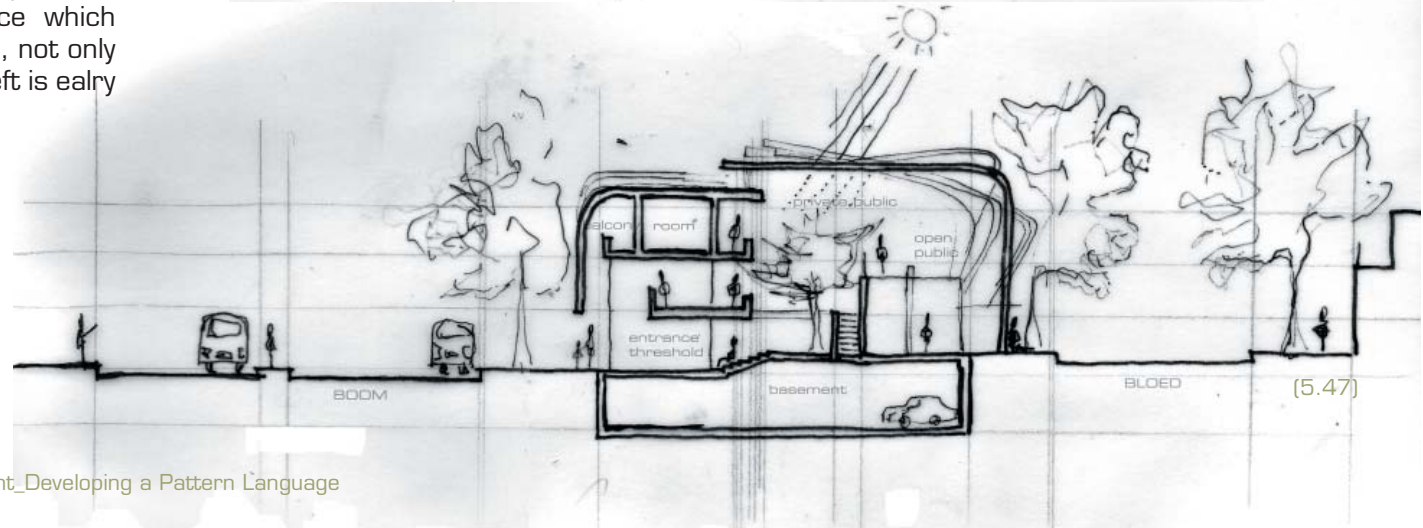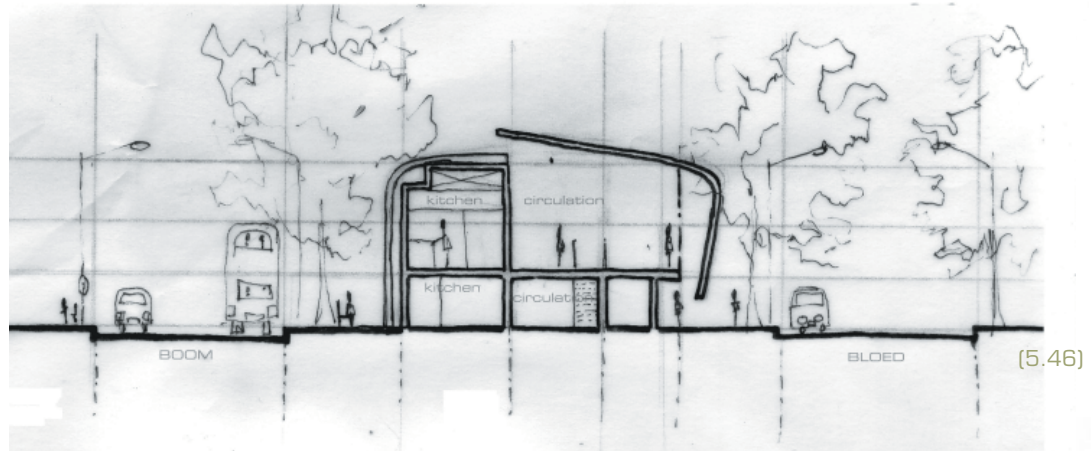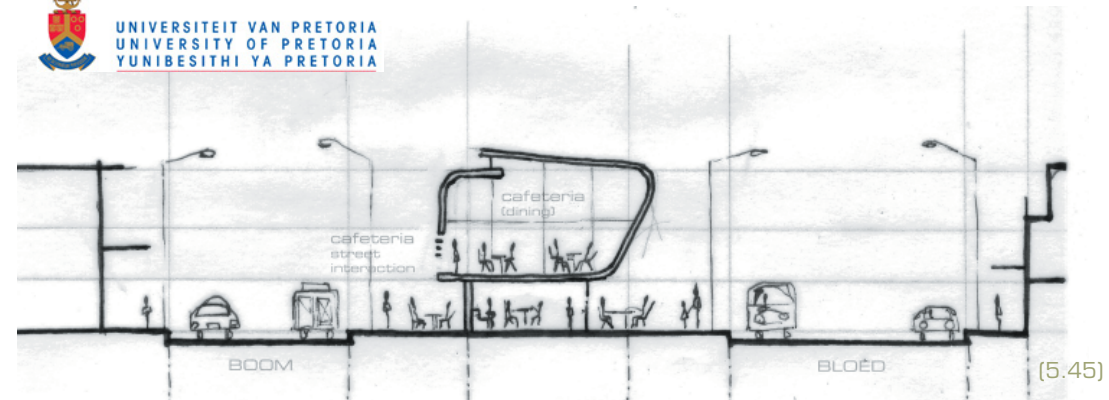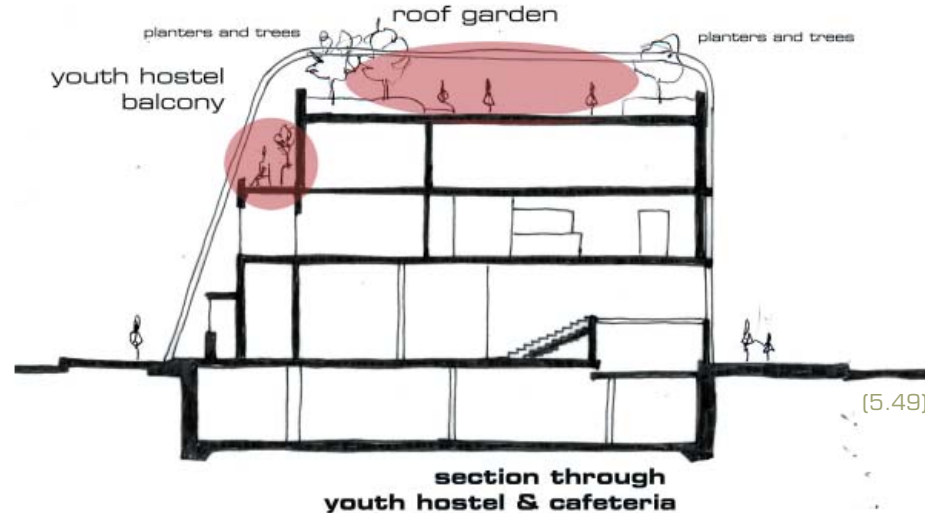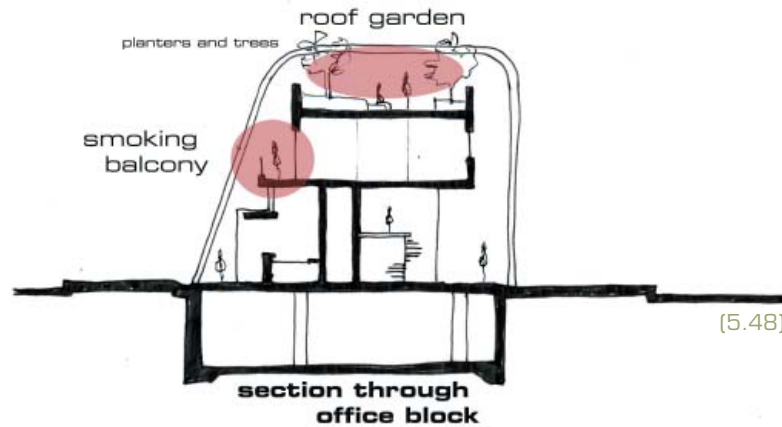
Pattern 118: Roof garden

A vast part of the earth's surface, in a town or city, consists of roofs. Couple this with the fact that the total area of a town which can be exposed to the sun is finite, and you will realize that it is natural, and indeed essential, to make roofs which take advantage of the sun and air. (Alexander, Ishikawa & Silverstein 1977:576)

This pattern was embraced and almost every part of the concrete roof system was designed as usable roof gardens. It was also incorporated as balconies where one can walk out directly out onto it from the lived-in parts.

roof plan

rooms at
the same level

(5.50)

Figure (5.48) & (5.49):
Sections indicating roof gardens and balconies
Figure (5.50):
Sketch indicating rooms at the same level as the roof garden

Pattern 119: Arcades

This pattern suggests that wherever paths run along the edge of buildings, one needs to build arcades, and use the arcades, above all, to connect up the buildings to one another, so that persons can walk from place to place under the cover of the arcades (ibid:583).

The steel structure which covers the building automatically creates an arcade system that itself becomes a place that is partly inside the building (figures 5.52 and 5.53). This effect is also increased by the path of the arcade opening directly into it the space created by the building complex. (Figure 5.45)

(5.52)

section through office block

(5.53)

arcades which pass through buildings

continuous arcades

(5.51)

(5.54)

arcade systam

arcades pass through buildings

arcade systam
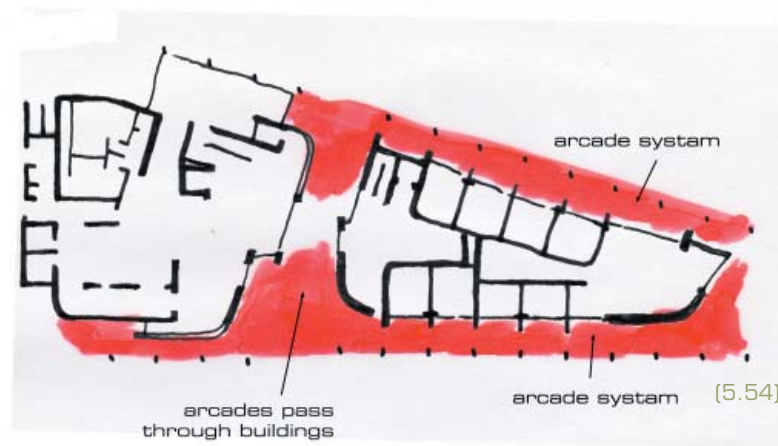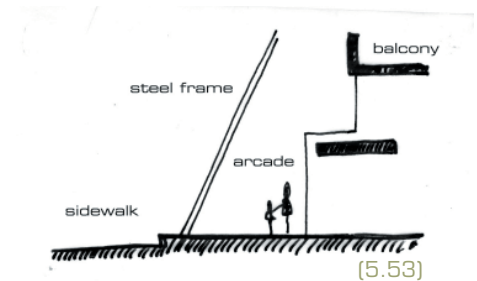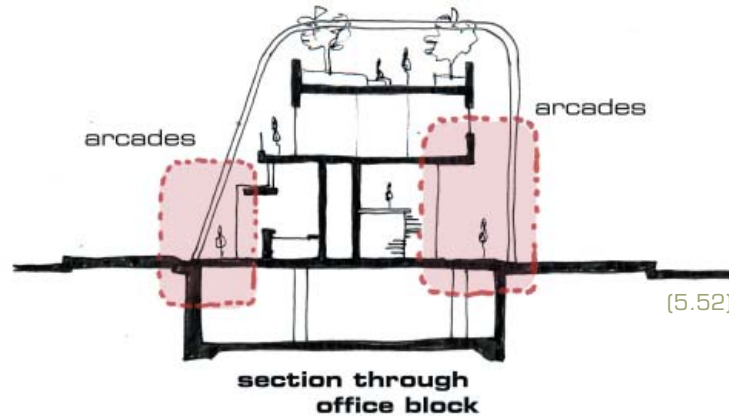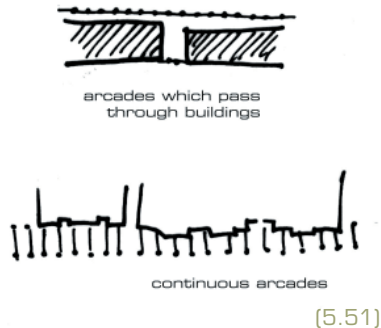
Figure (5.51)
Alexander's illustration of the concept
Figure (5.53):
Concept section through shop front
Figure (5.54):
Plan indicating in red the arcades alongside the building

(5.55)

Figure (5.55):
Development of the staircase and its position in the design process

glass window

remove wall to create stair seats
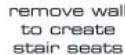
Pattern 133: Staircase as a stage

A staircase, according this pattern, is not just a way of getting from one floor to another. The stair is itself a space, a volume, and a part of the building; and unless this space is made to live, it will be a dead spot, and work to disconnect the building and to tear its processes apart (Alexander, Ishikawa & Silverstein 1977:638). The staircase provide for a special situation: from providing place to sit or being a place where someone can make a graceful or dramatic entrance or even a place from which someone can speak. This suggests that the stair always be made rather open to the room below it, embracing the room, so that the stairs together with the room form a socially connected place (ibid.). Figure 5.55 indicates the development of the staircase – its position and character – within the design intervention.

stair seats   (5.56)

examples of stair rooms   (5.57)

Pattern 146: Flexible office space

This pattern poses the question whether it is possible to create a kind of space which is specifically tuned to the needs of people working, and yet capable of an infinite number of various arrangements and combinations within it (Alexander, Ishikawa & Silverstein 1977:690). The diagrams illustrate how the proposed office space was designed as an open wing of space in order to ensure the flexibility of a variety of different users.

Pattern 147: Communal eating

The importance of this concept is clear in all societies, and it plays a vital role in almost all social groups as a way of binding people together. Additionally, within the metropolitan society, it creates the possibility of meeting a wonderful variety of new people (Alexander, Ishikawa & Silverstein 1977:699). Communal eating becomes one of the main functions within the design and eating together becomes an important, comfortable, and daily event.
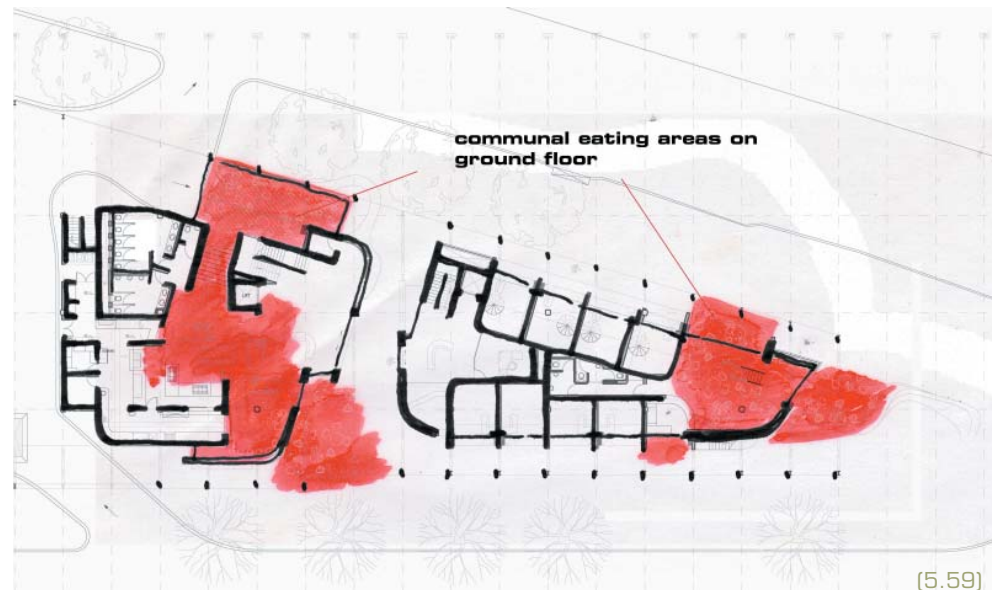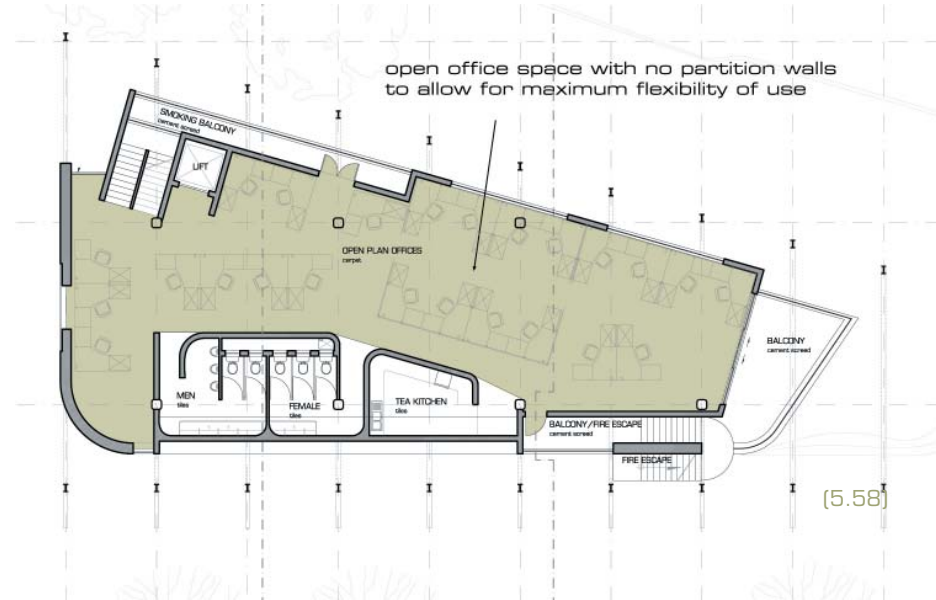
Figure (5.58):
First floor plan showing the open office space
Figure (5.59):
Sketch indicating the areas of communal eating

(5.58)

(5.59)

secondary waiting area

primary waiting area

(5.60)
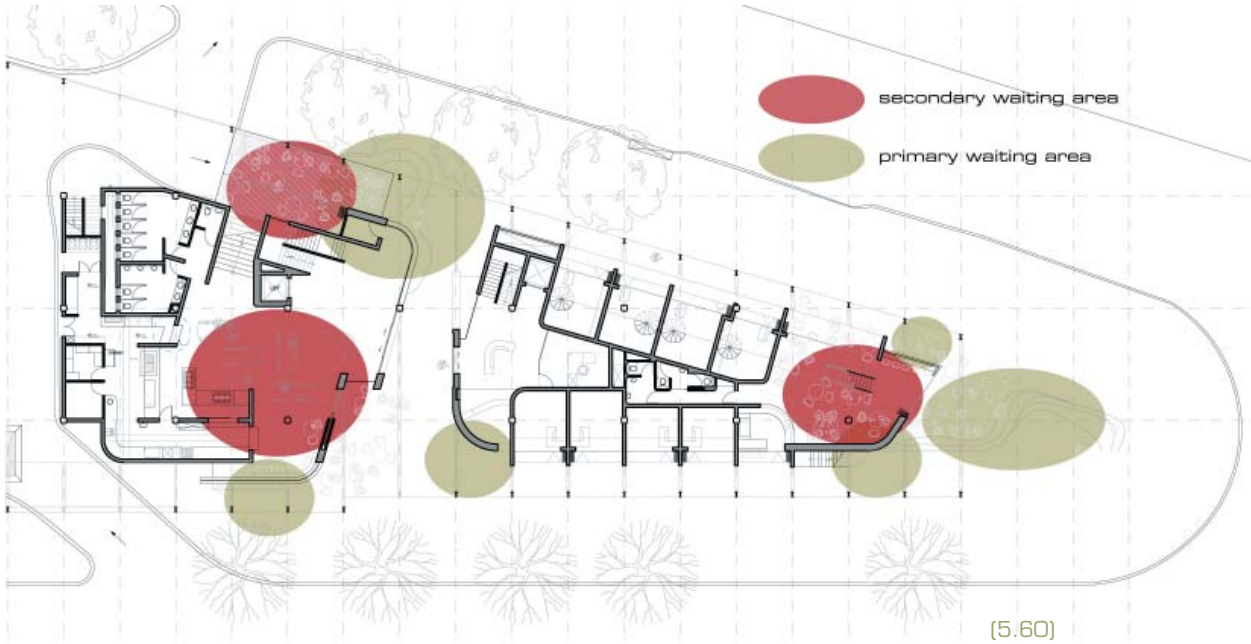
Figure (5.60):
Primary and secondary waiting areas on ground floor

Pattern 150: A place to wait

Waiting is one of the daily rituals for a great amount of people within the study area. Some wait for transportation, some for work, some for service and others for meeting someone else. Alexander (1977:708) argues that the process of waiting has inherent conflicts in it. On the one hand, whatever people are waiting for, has built in uncertainties, which make it inevitable that they must spend a ling time hanging around, waiting, and doing nothing. On the other hand, they cannot usually afford to enjoy this time. Because it is unpredictable, they cannot even take a stroll or sit outside/inside. Alexander suggests that the places where people end up waiting must be designed in such a way which makes the waiting possible.

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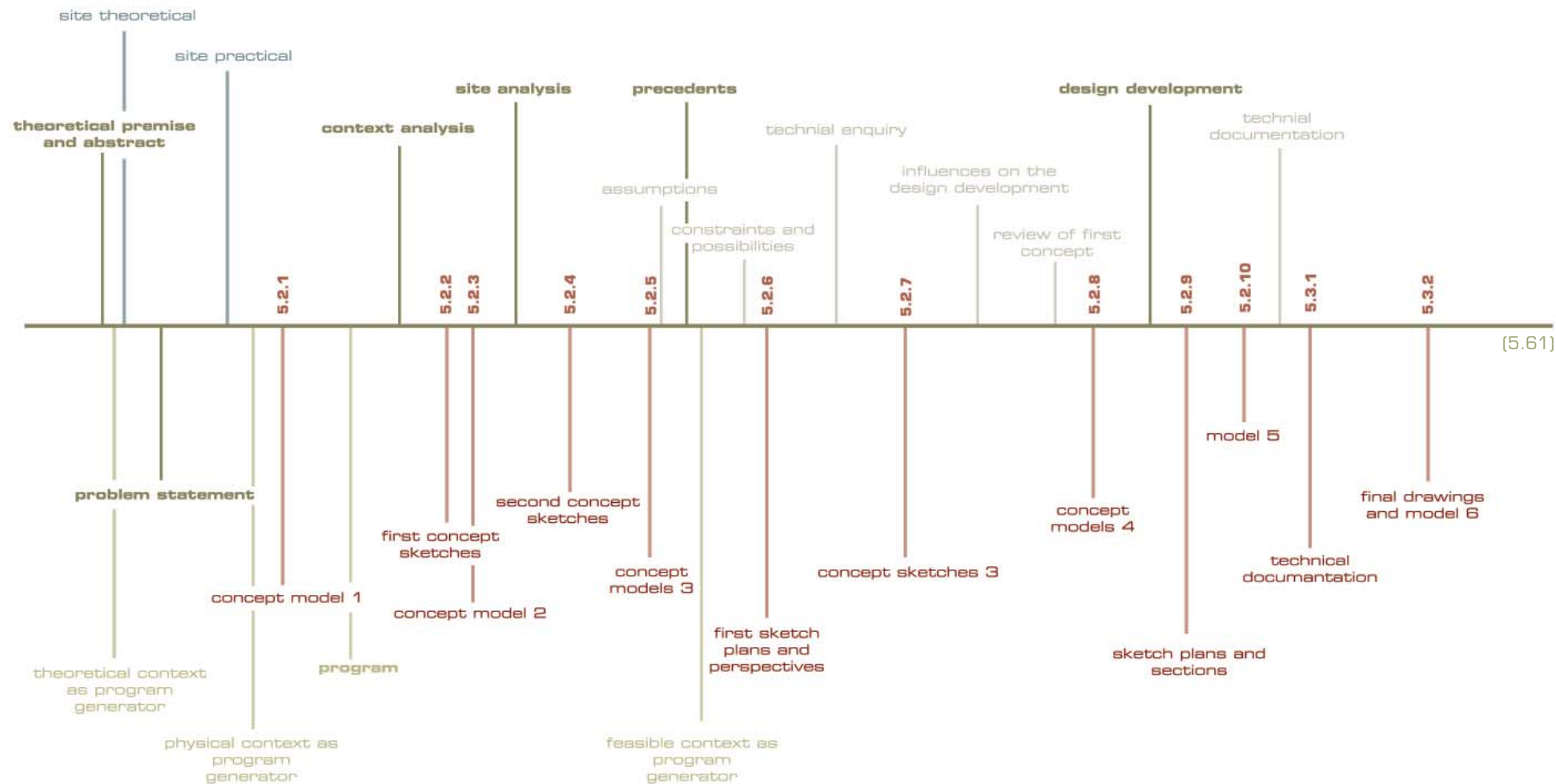
Figure (5.61):
Timeline indicating the transition of the design process in relation to the development of the project

(5.62) First Concept Model - April 2007

(5.65) First Concept Model - April 2007

The first concept model explores the theoretical and practical isolation of the building surface as the subject of the design. The autonomy of the surface, the 'free facade,' presumes a distinction between the structural and nonstructural elements of the building, between the frame and the cladding. Once the skin of the building became independent of its structure, it could just as well hang like a curtain, or like clothing. The focus of the relationship between structure and skin is the architectural surface. The concept also manifests influences of pattern 117 (pg. 124), indicating how the principles of the 'sheltering roof' can be applied.

(5.63) First Concept Model - April 2007

(5.64) First Concept Model - April 2007

(5.66)

Figure (5.66):
Sketch illustrating the 'growth' of the skin from being a structural to a non-structural element

The specific functions of a building may suggest various constructional forms that channel working routines and modes of behaviour. The first concept sketches investigate the organisation of functional sequences by illustrating explorative systems of enclosure. Orientation, that is 'to find one's way', plays a dominant role in this.

(5.67)

(5.68)

axial   axial

fork-like   fork-like
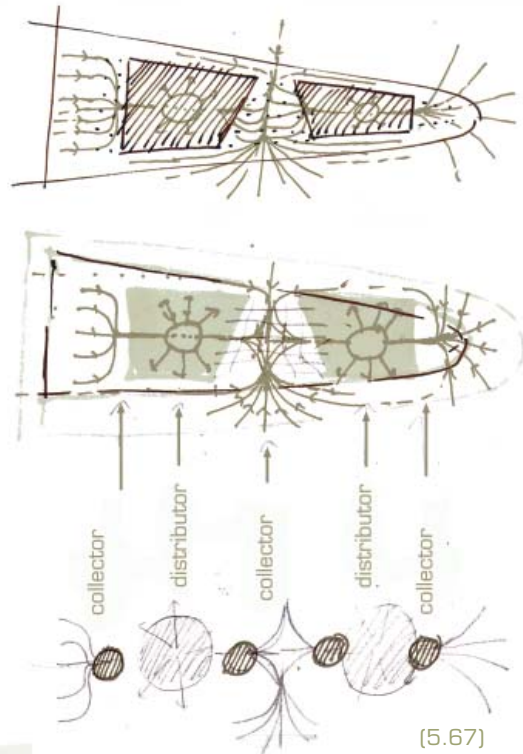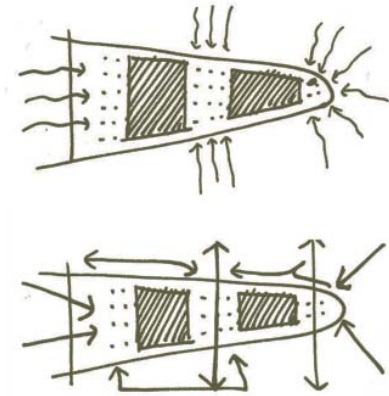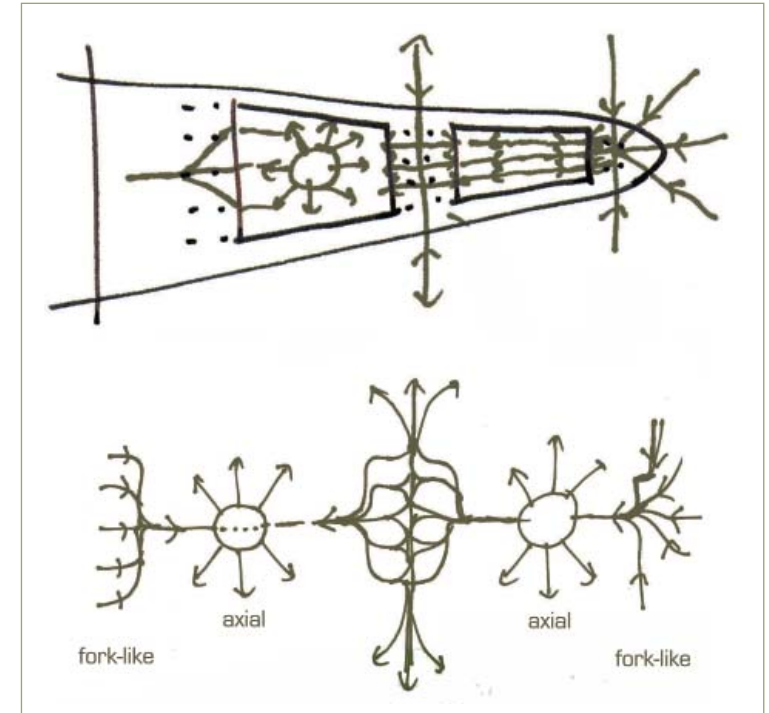
(5.69)

Figure (5.67):
Sketch illustrating graphically the sequence as processes of collectors and distributors
Figure (5.68):
Sketch exploring systems of collectors
Figure (5.69):
Systems of enclosure as part of the transition process

REAL SCENARIO:
RESPONSIVE

As within the Constitutional Court (pg. 87, figure 4.15), the interconnectivity and character of these functional sequences will contribute to the relation between the ideas of 'inside' and 'outside'.
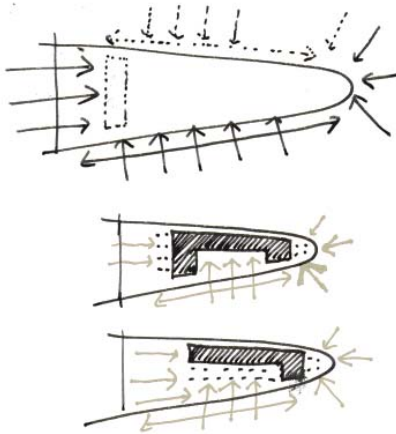
Figure (5.71):
Points from which collectors accumulate
Figure (5.72):
Sketch exploring permeable and responsive footprints
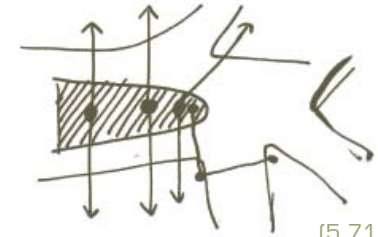
(5.71)

PROJECTED SCENARIO:
RESPONSIVE

(5.72)

(5.70)
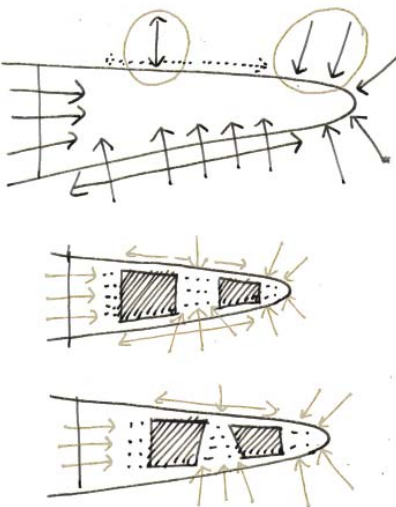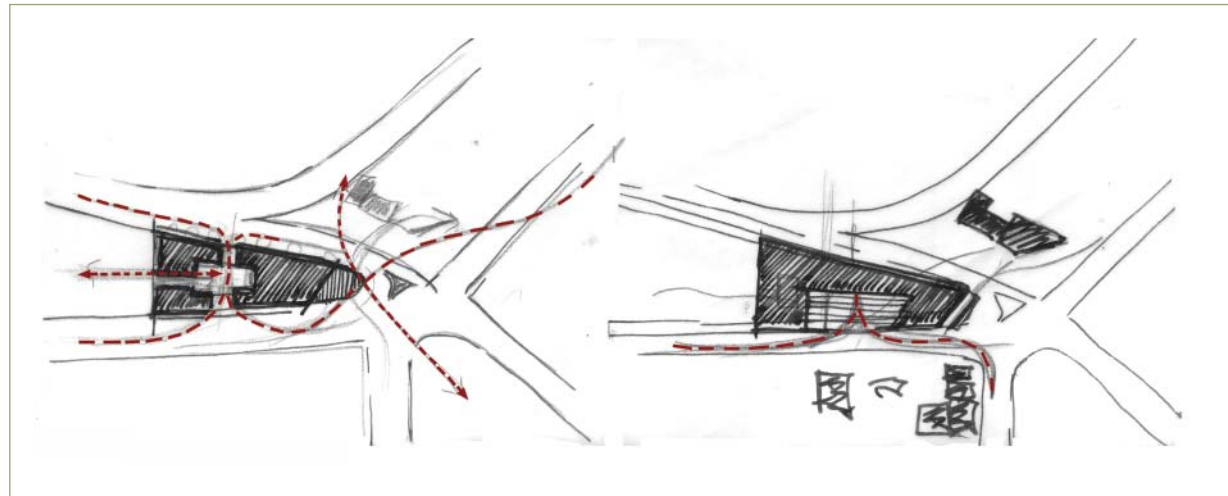
The following diagrams were developed during a very early stage in the design process (March 2007), and illustrates the ordering of facilities within the intervention. It also indicates the relation between the different levels, which accordingly influenced the relation between inside and outside space.

(5.73)

(5.74)
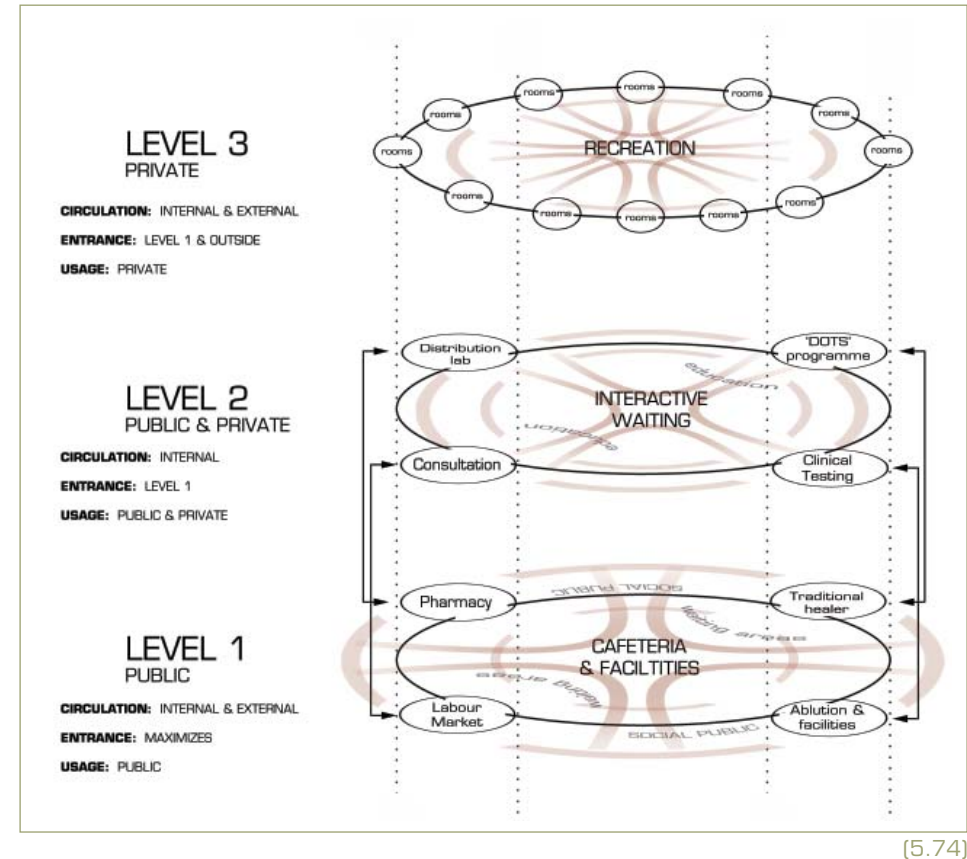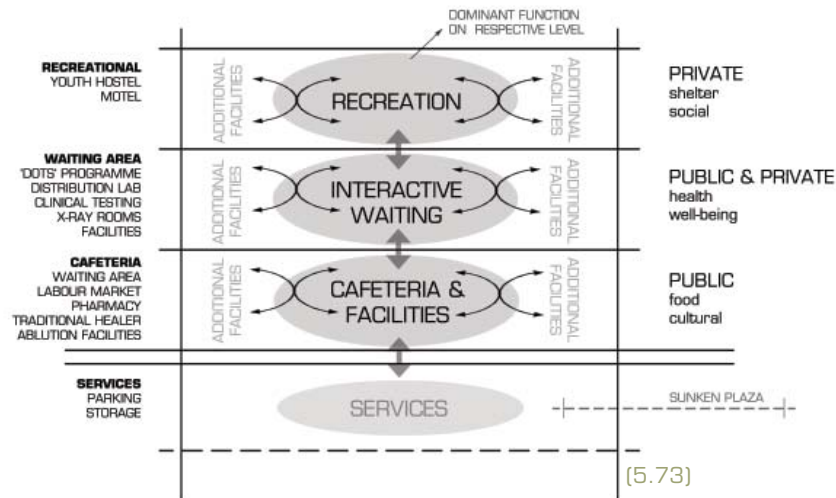
Figure (5.73) & (5.74):
Diagrammatic ordering of facilities, March 2007

As within the first concept model (page 132), this model also explores the building surface as subject to the design. However, giving the illusion of being a solid mass, the properties of the building surface – whether it will be made out of concrete, metal, glass, or any alternative materials – are not merely superficial; it construct the spatial effects by which the architecture communicates. Through its surfaces the concept model declares both its autonomy and its participation in its surroundings.

Figure (5.75) - (5.80):
At this stage the concept lack the direct link to the transitional context as described on pages 87, 88 and 124
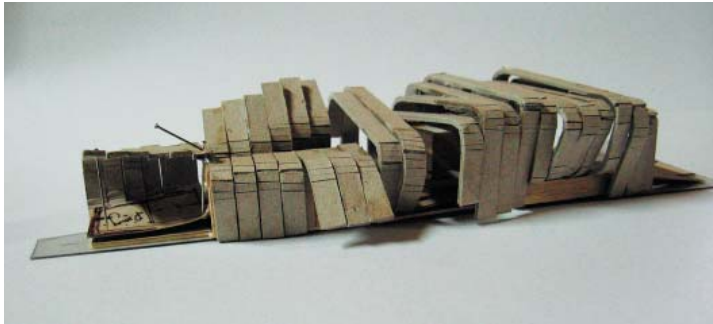
(5.75) Second Concept Model - May 2007

(5.76) Second Concept Model - May 2007
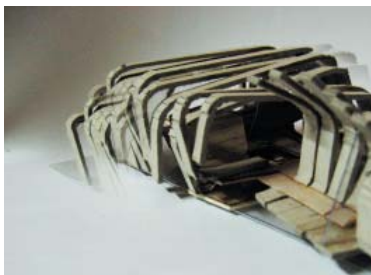
(5.77) Second Concept Model May 2007
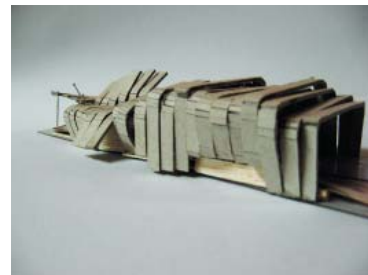
(5.78) Second Concept Model May 2007
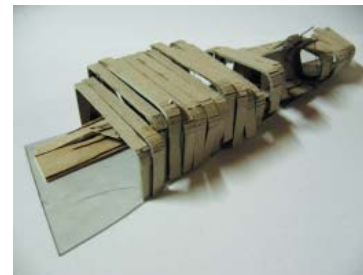
(5.79) Second Concept Model May 2007

(5.80) Second Concept Model May 2007

The ordering of functional sequence are still the subject of investigation, but in addition, superimposed with the circulation patterns derived from the site analysis. The sketches also illustrate responsive lines and form generated from these concepts.

(5.81)
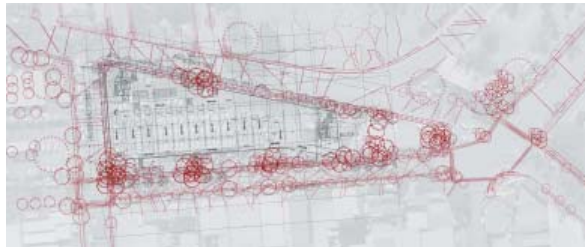
(5.82)
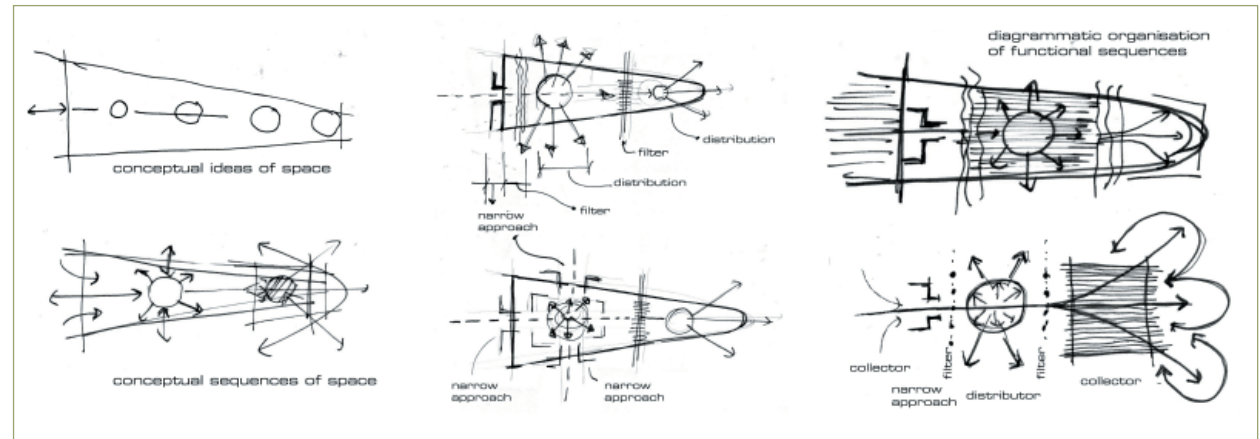
(5.83)

Figure (5.81):
Existing pedestrian patterns
Figure (5.82):
Future pedestrian patterns
Figure (5.83):
Sketches exploring the ordering of functional sequences superimposed with pedestrian patterns
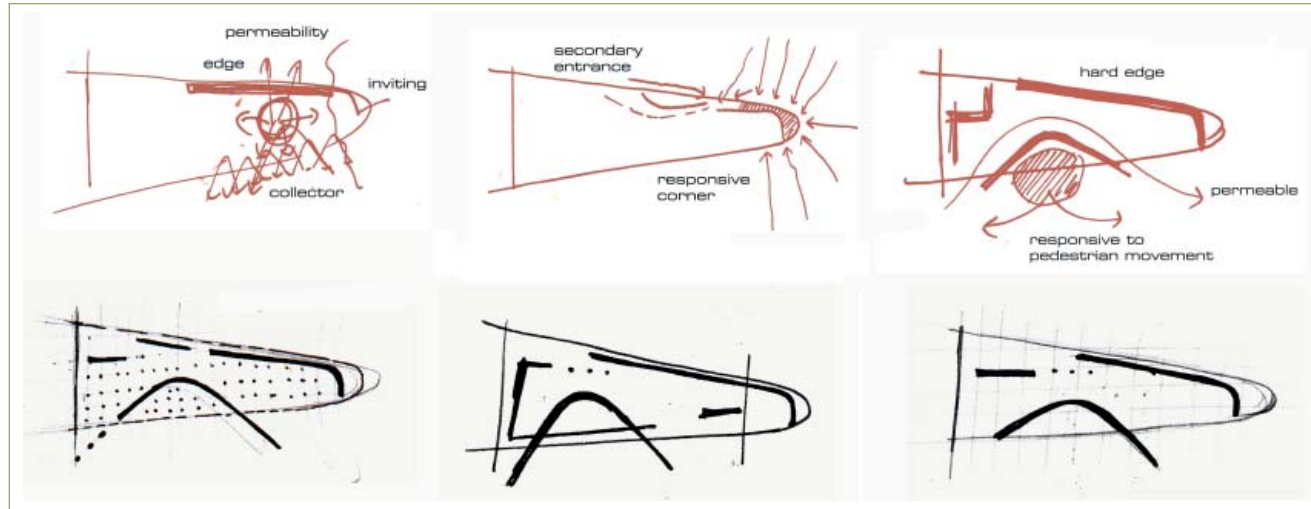
Figure (5.84):
Sketches responding to pedestrian patterns (red) and responsive lines (black)

Figure (5.85):
Responsive sketches later in the conceptual design process

(5.84)
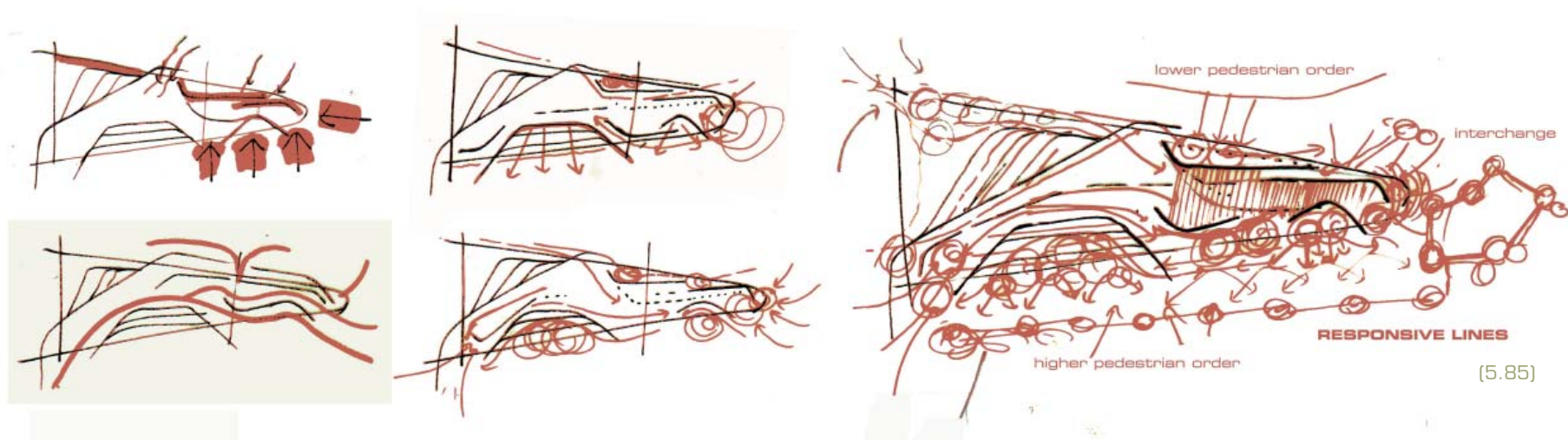
(5.85)

The conceptual design considered a taxi rank development as part of the intervention proposed by the author, and only at a later stage assumed the Bloed Street Taxi Rank, as to be built by the RAI-group, as a given. The sketches illustrate these early concepts - responsive to the vehicular circulation patterns.

(5.86)
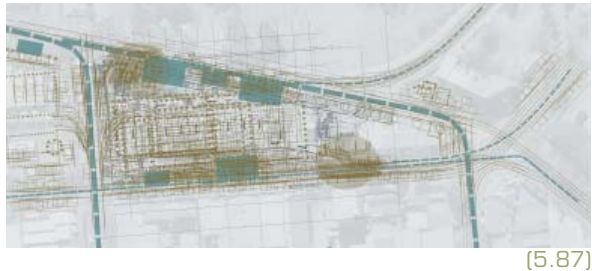
(5.87)
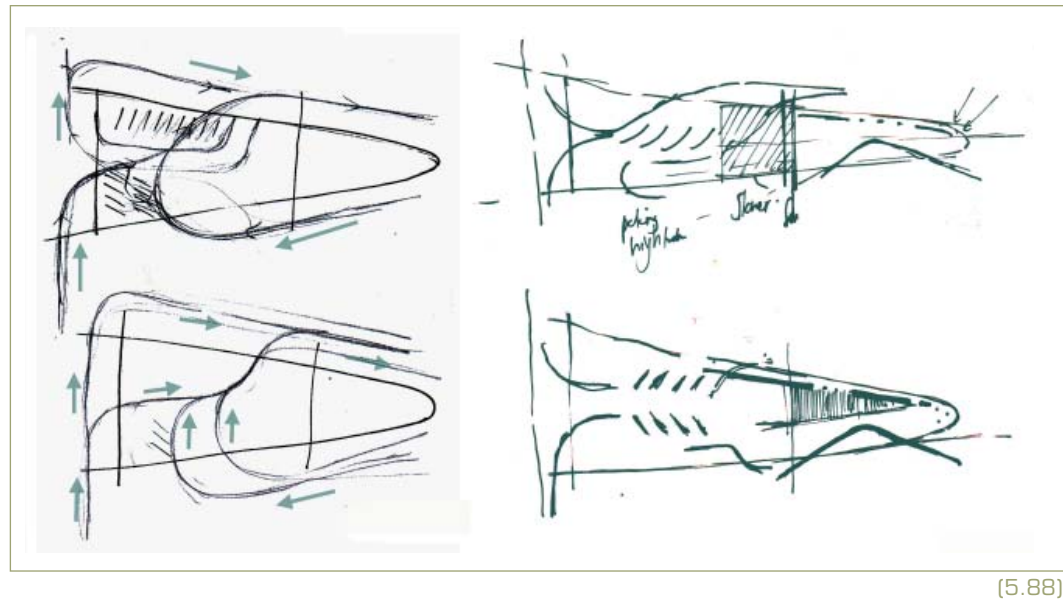
(5.88)

Figure (5.86):
Existing vehicular circulation patterns
Figure (5.87):
Future vehicular circulation patterns
Figure (5.88):
Sketches exploring the ordering of functional sequences and circulation superimposed with vehicular patterns

loading

exit

entrance

arival → direct link with building

loading

entrance

parking

loading

exit

entrance

direct link with building

pedestrians

loading

loading

loading

entrance

(5.89)

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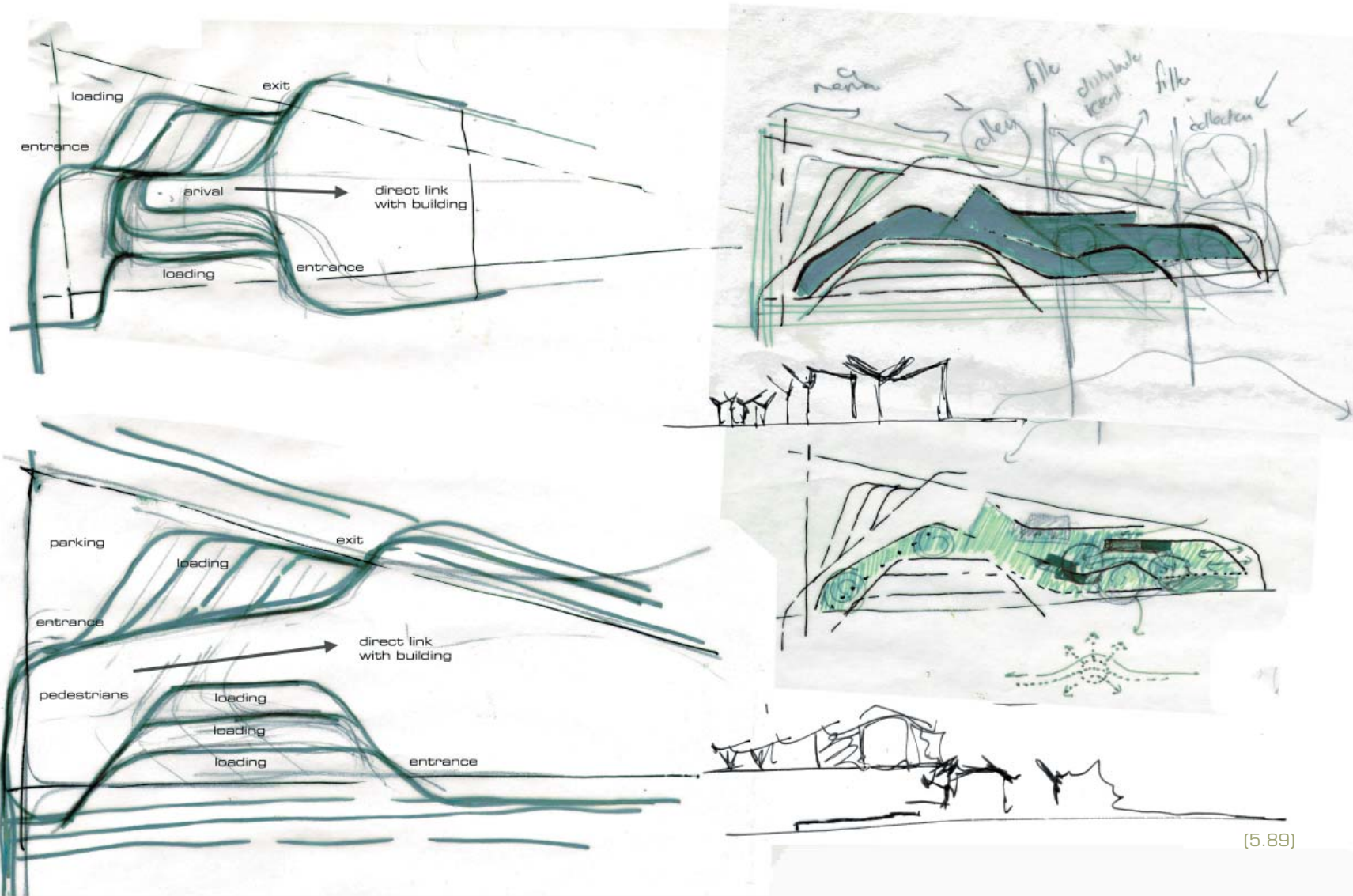
These sketches illustrate the development of 'bulk mass' and introduce the form to which a third range of concept models where developed. This form was predominantly influenced by existing and proposed circulation patterns.

(5.90)

(5.91)

(5.92)
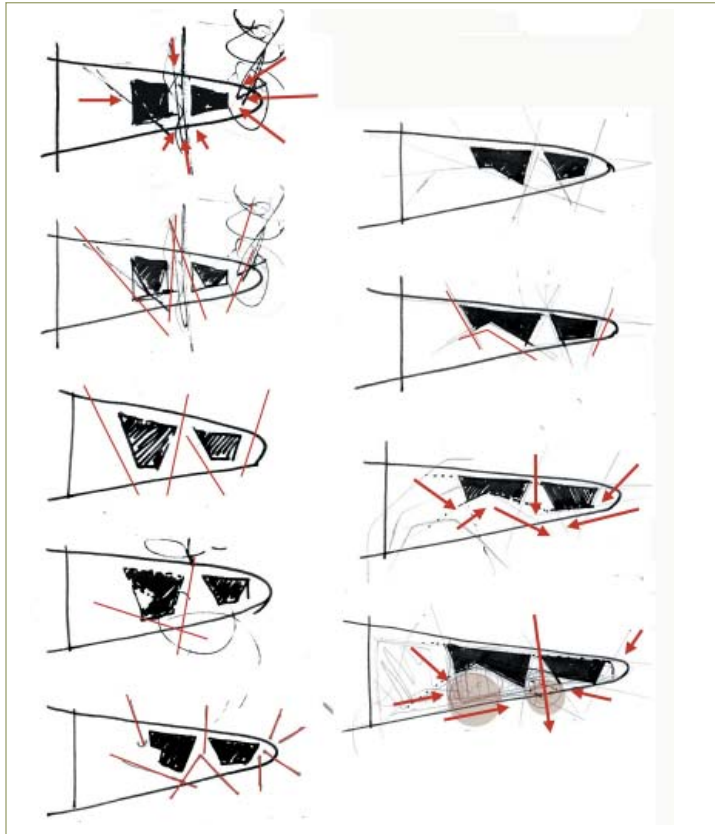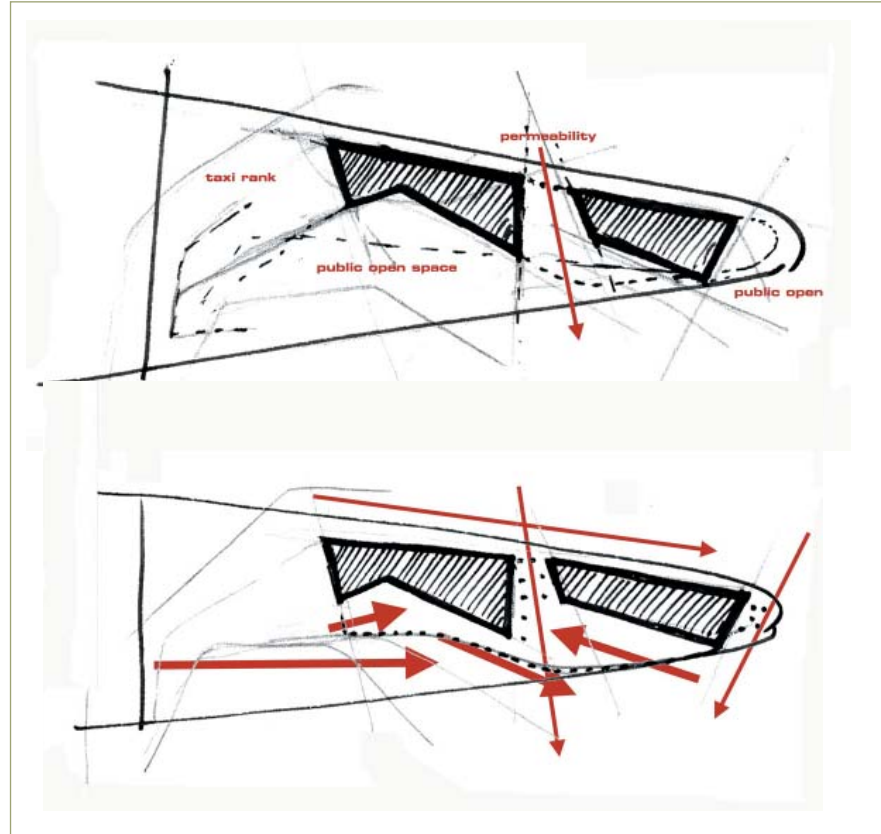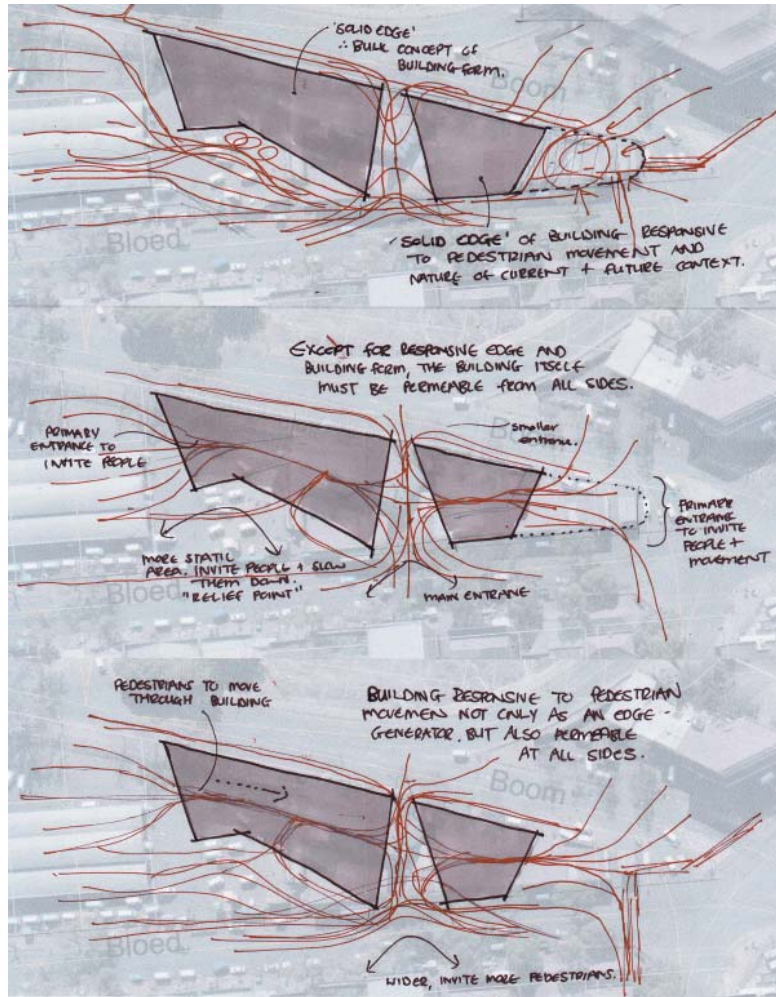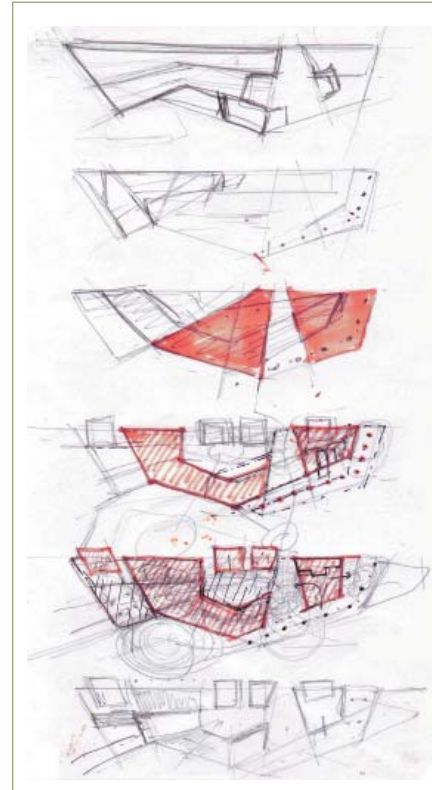
The bulk form is arranged in such a way that it forms a pedestrian street; with many entrances it will result in a highly permeable building. This principle is derived from pattern 100, 'the pedestrian street' (pg. 120). To create the social intercourse of public movement as far as possible, the movement between rooms, offices, departments and buildings within the building complex, must also be outdoors, on sheltered walks, arcades, paths and streets.

(5.93)

Figure (5.92):
Development of initial bulk form model (figure 5.94)
Figure (5.93):
Development of bulk form model 2 (figure 5.95)
Figure (5.94) & (5.95):
Bulk form models '1' and '2'

(5.94)

(5.95)

gure (5.96):
Development and aspects of the concept models

[5.96]
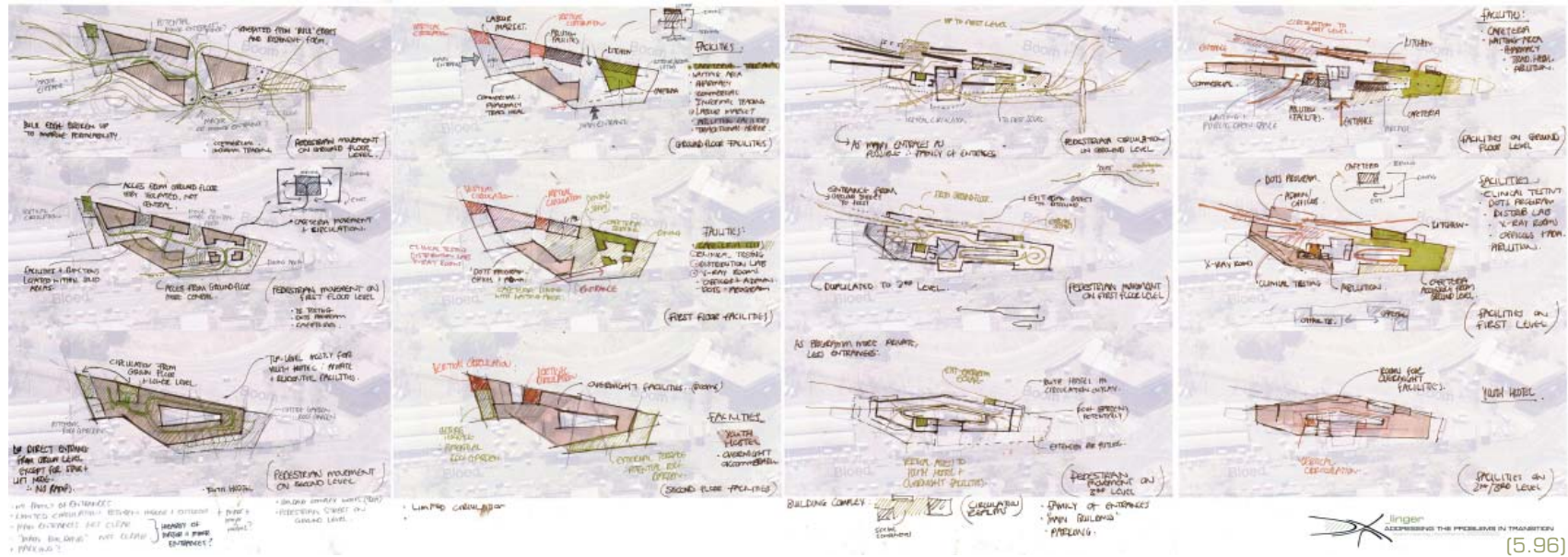
[5.97] Concept Models 3 - May 2007

[5.98] Concept Models 3 - May 2007

[5.99] Concept Models 3 - May 2007

[5.100] Concept Models 3 - May 2007
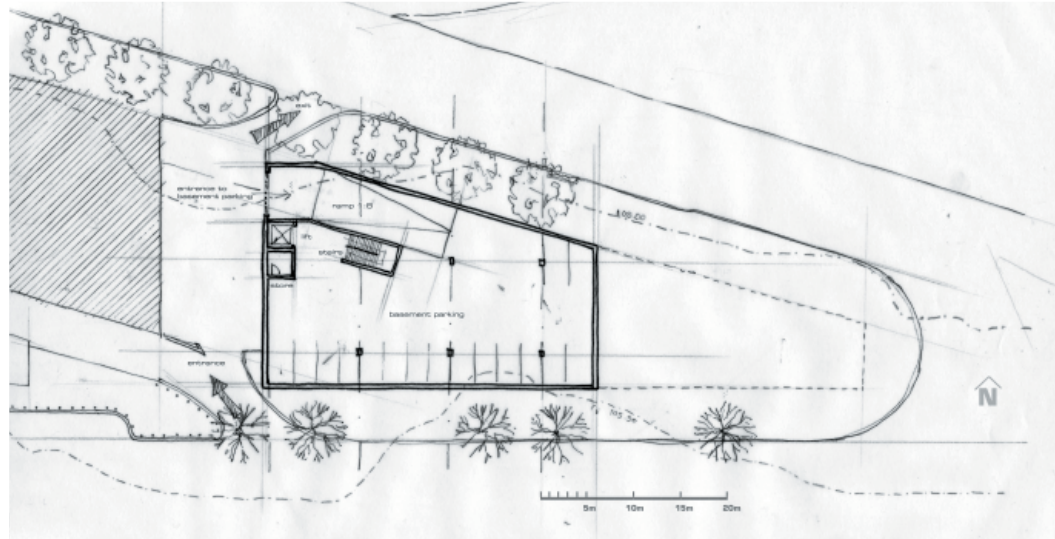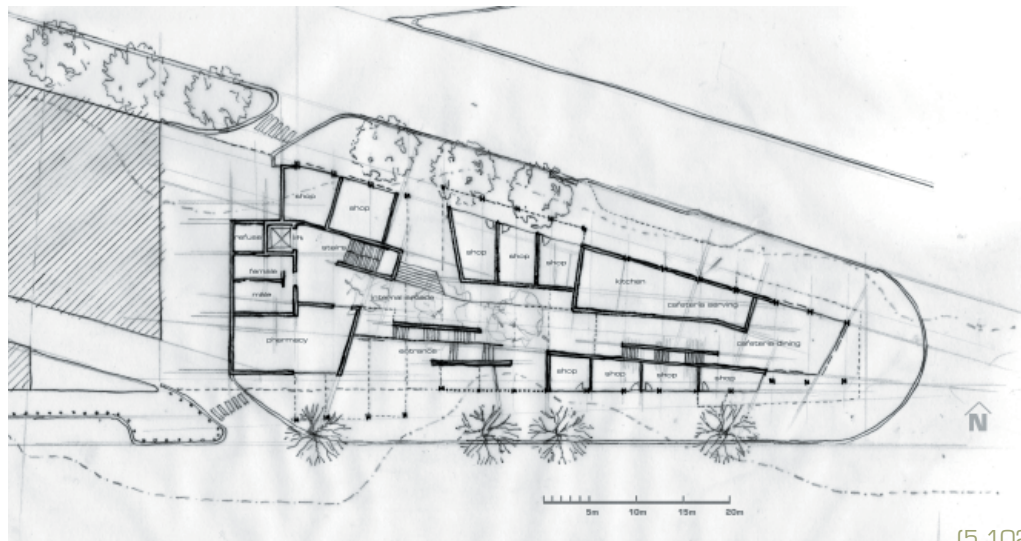
(5.101)

Figure (5.101):
Basement plan - June 2007
Figure (5.102):
Ground floor plan - June 2007
Figure (5.103):
The internal 'corridor' was later replaced by building mass

(5.102)
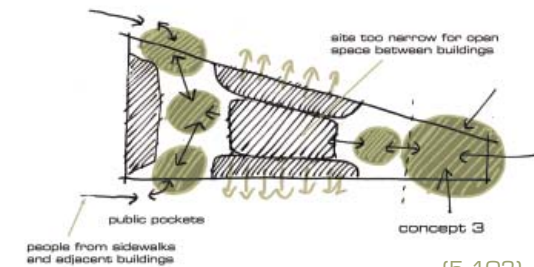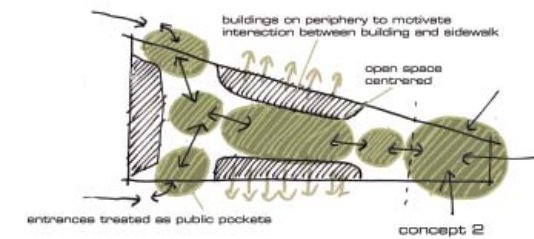
(5.103)
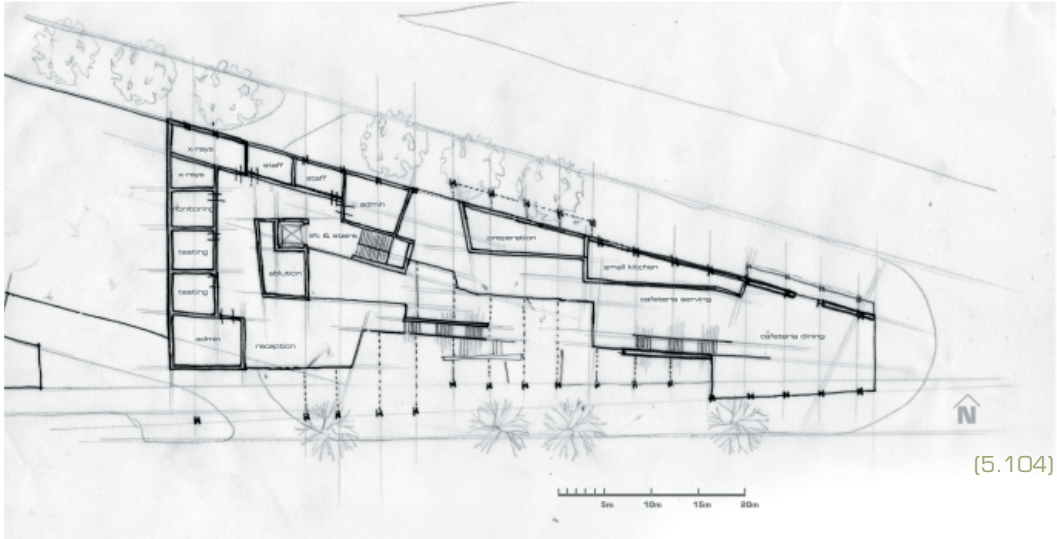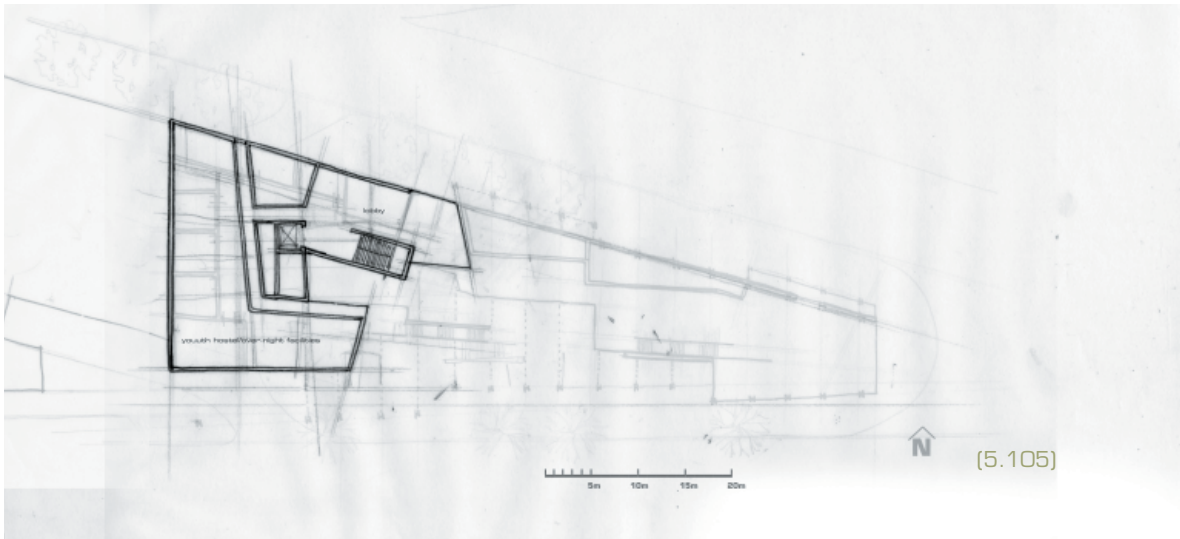
Figure (5.104):
First floor plan - June 2007
Figure (5.105):
Second floor plan - June 2007
Figure (5.106):
Concept sketches exploring interaction
between building and sidewalk

(5.104)

(5.105)
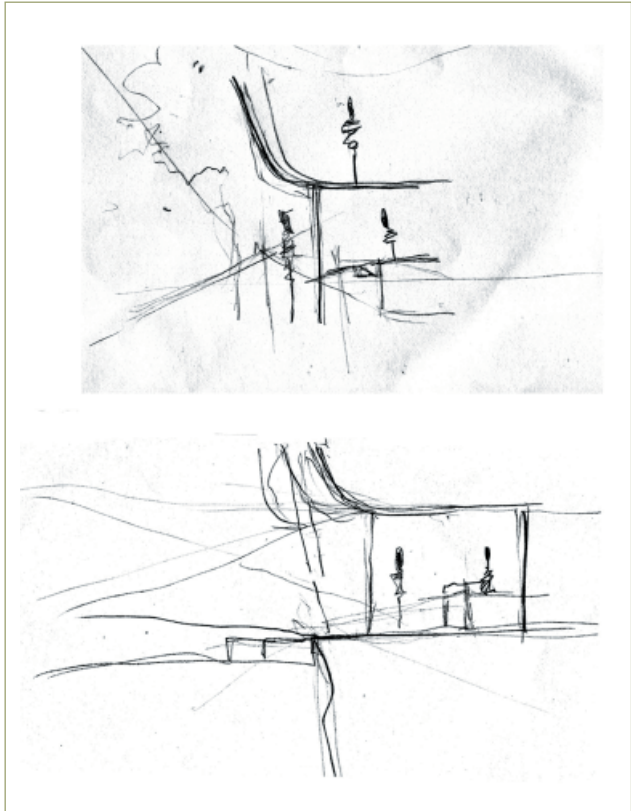
(5.106)

(5.107)

Defining an edge itself manifests the theoretical concept of the border, reflecting the process of transition by initiating an alternative urban fabric; one in which the segregation of 'inside' and 'outside' is being enriched by a third dimension of the 'in-between.

(5.108)
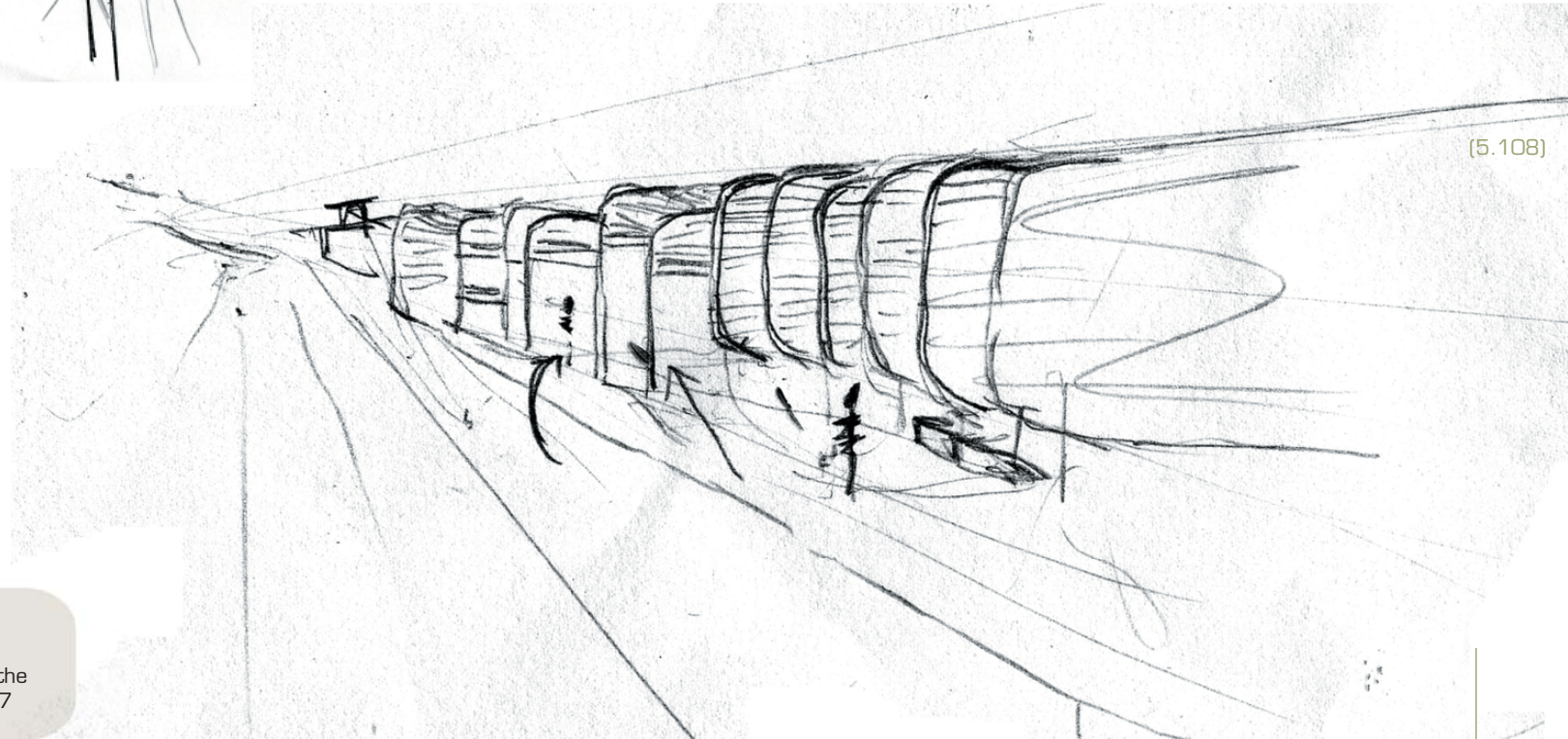
(5.109)

Figure (5.107), (5.108) & (5.109):
Perspectives and views of the proposed building - June 2007

The aim is to design a place in which all people would feel welcome, where Africans from urban and rural areas, the young and the old, could gather without inhibition, and have a connection, a sense of belonging and identity.

(5.110)

Figure (5.110) & (5.111):
Views as approached from the north-eastern side
Figure (5.112):
View from inside of the cafeteria towards the intersection
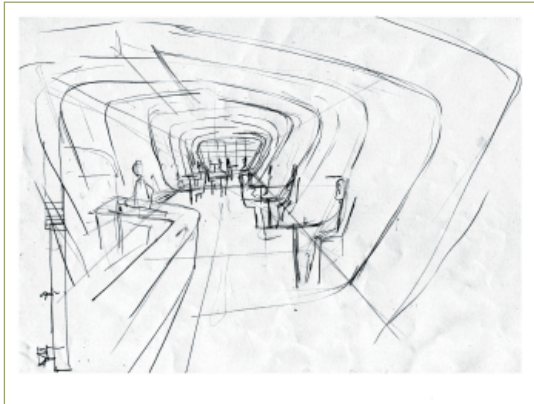
(5.111)

(5.112)
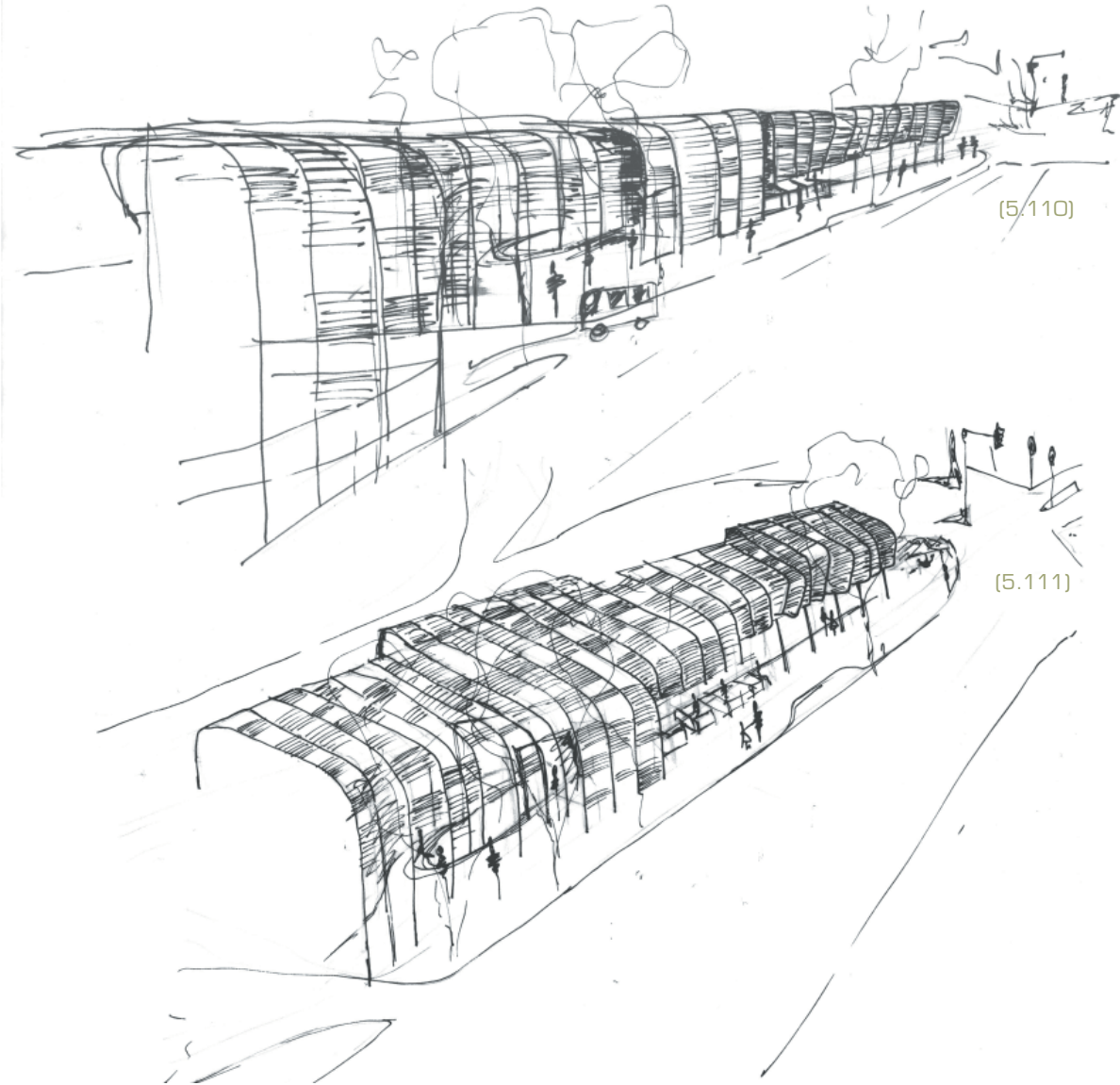
The intervention encourages active participation and accessibility, offering safe and legible places for people to gather, while everyday activities can happen all around them.
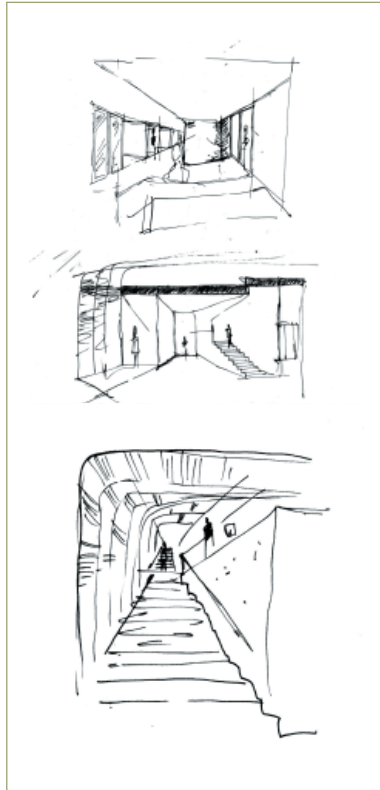
(5.113)

(5.114)

(5.115)

(5.116)

Figure (5.113):
Interior views and perspectives
Figure (5.114) - (5.116):
Sketches illustrating everyday activity around the building within open public space
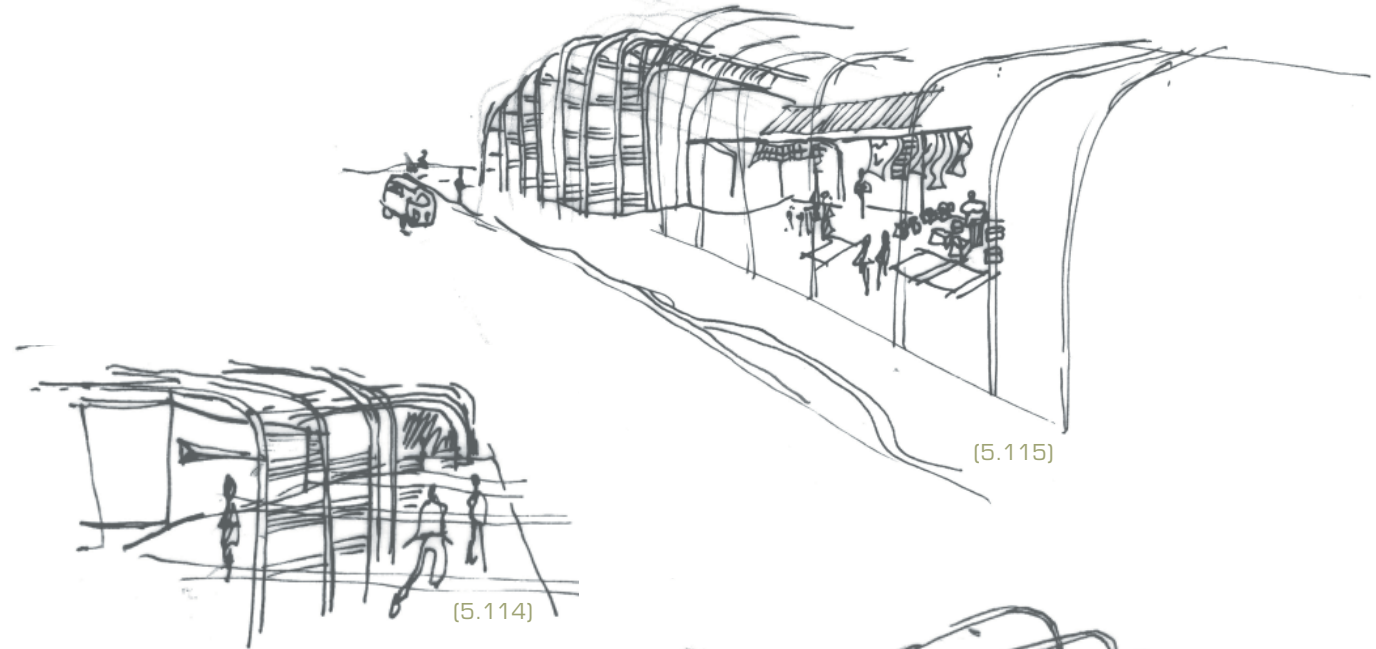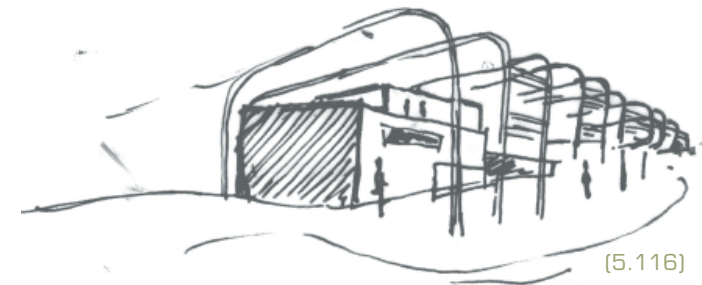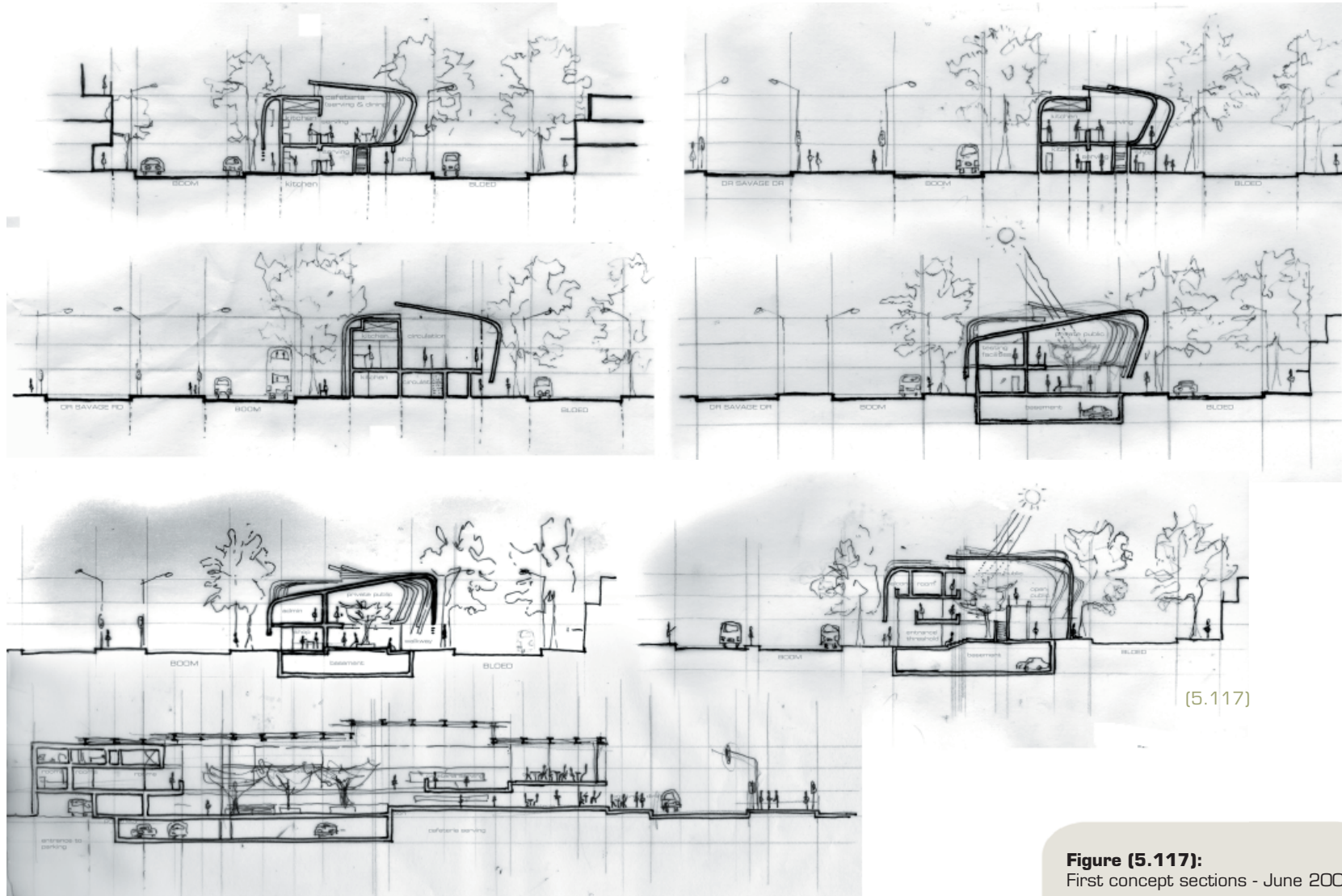
Figure (5.117):
First concept sections - June 2007

(5.117)

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Figure (5.118):
Concept sketches exploring potential structural solutions

At this stage of the design process, the structure of the building was of primary concern in the dissertation. An investigation of possible structural solutions enabled the designer to have a better concept of the building and the tectonics involved.
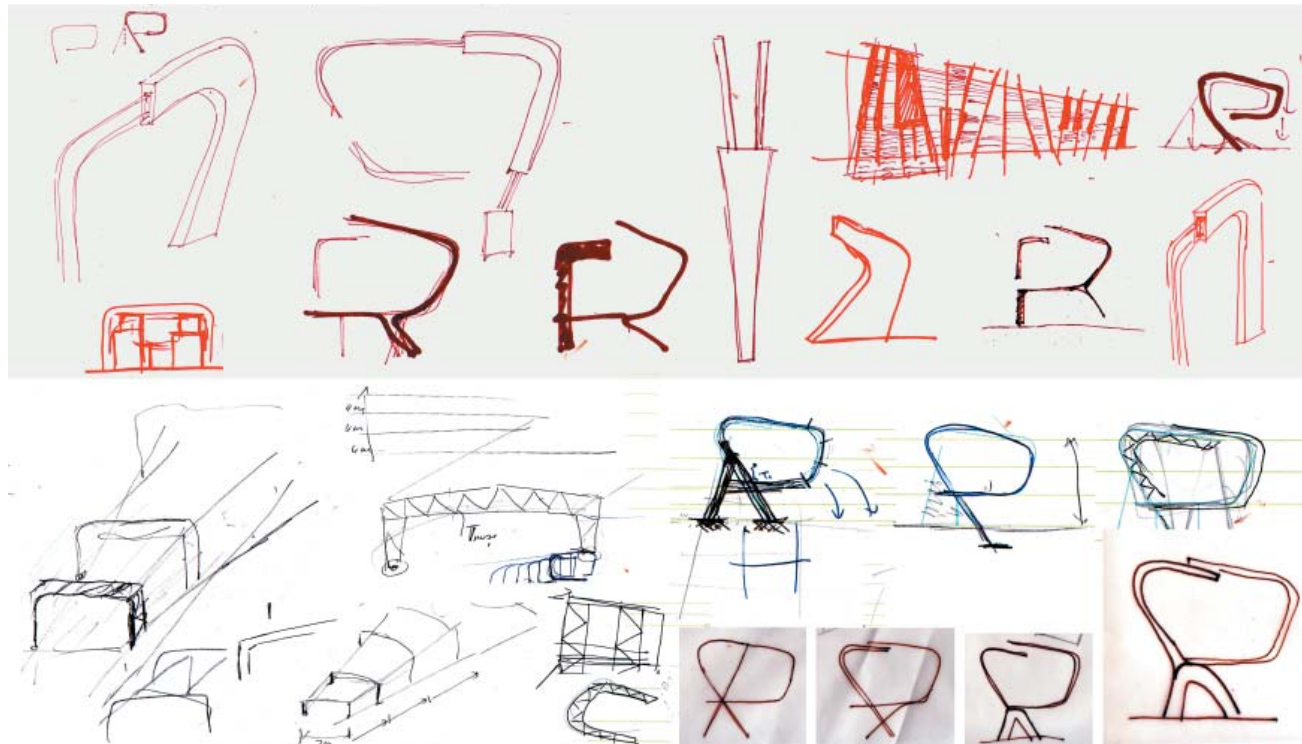
(5.118)

Figure (5.119):
Conceptual sketches investigating alternative load bearing structures

The aim was to reveal the strucutral system of the building to the user, through honesty of construction. Precedents where also sought that dealt with folding planes and alternative laod distribution systems.
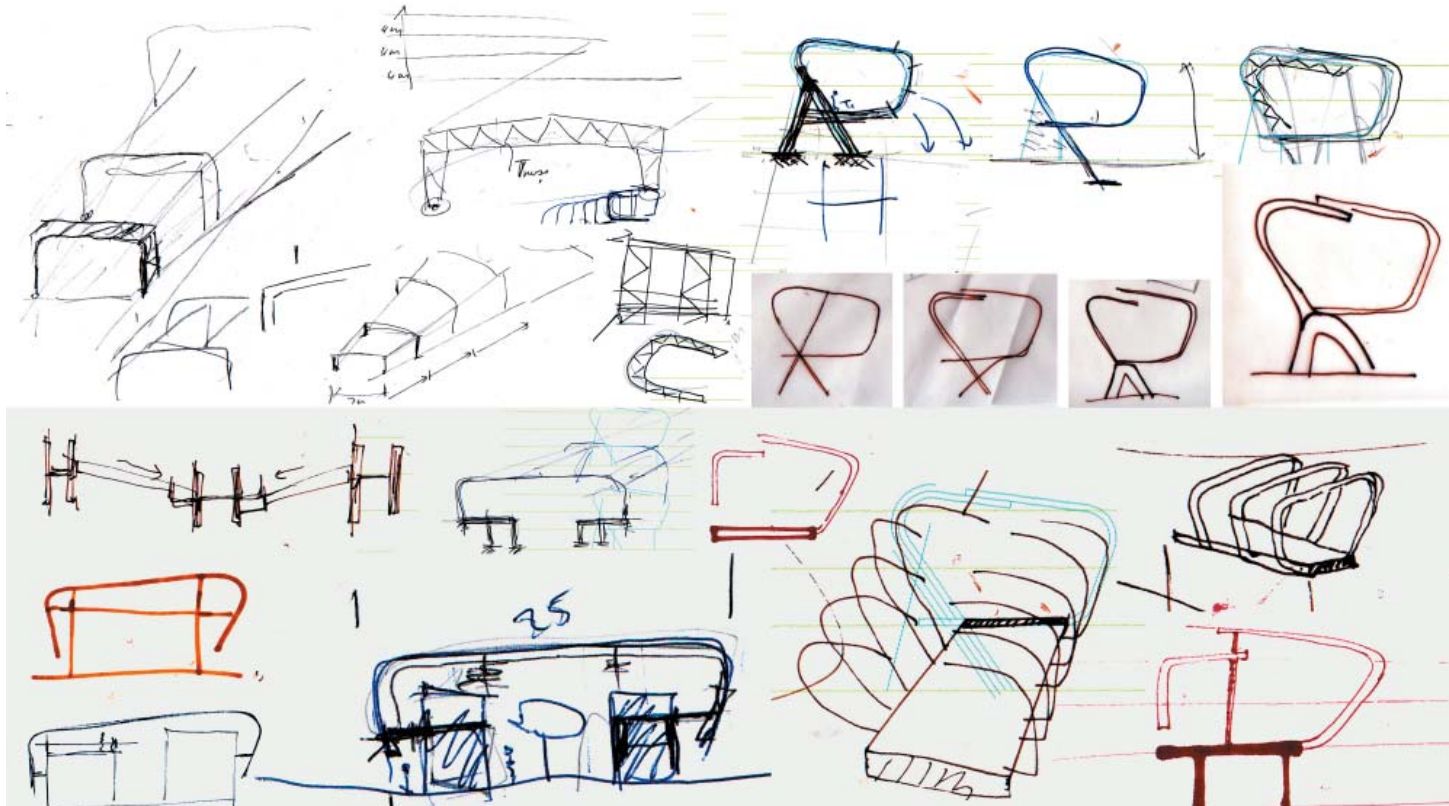
(5.119)

(5.120)

(5.121)

The structural design of the building evolved increasingly towards the end of the design resolution. It was at this stage that the designer did a revision of her first conceptual ideas and intentions. Cluttered with a vast amount of information, precedental inspiration and external input, the designer was forced to make elementary decissions regarding the structural participation of the additional skin. (Refer to pg. 124 & pg. 88) Retrospectively, the transitional context became an indisputable aspect of the initial concept and this could not be ignored.

Figure (5.120) & (5.121):
The work of Rem Koolhaas influential as subjected to folding planes
Figure (5.122) & (5.123):
Santiago Calatrava: Marousi, Athens and City of Science, Spain. His work was chosen as alternative precedent after revision of the designer's initial concepts

(5.122)

(5.123)
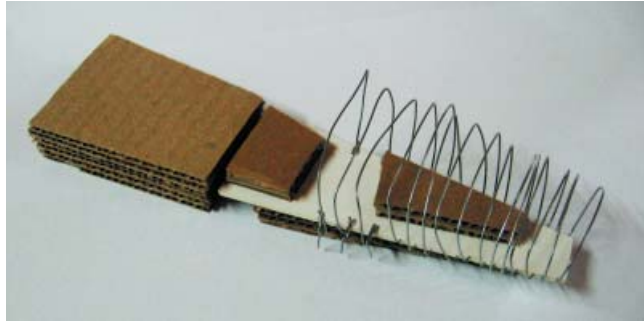
(5.124) Concept Models 4 - July 2007
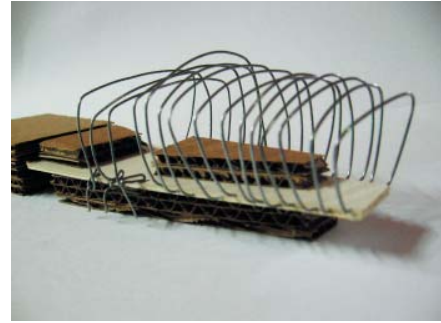
(5.125) Concept Models 4 - July 2007
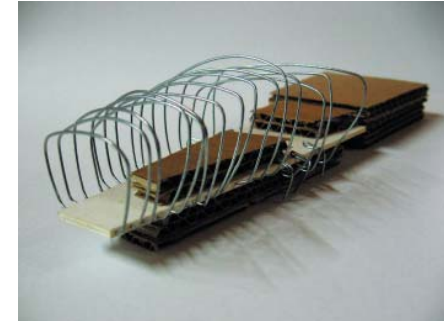
(5.126) Concept Models 4 - July 2007

This concept model is still very much concerned with the skin as being unseperable from the structure of the building. However, as mentioned earlier, the 'free facade' presumes a distinction between the structural and nonstructural elements of the building, between the frame and the cladding.
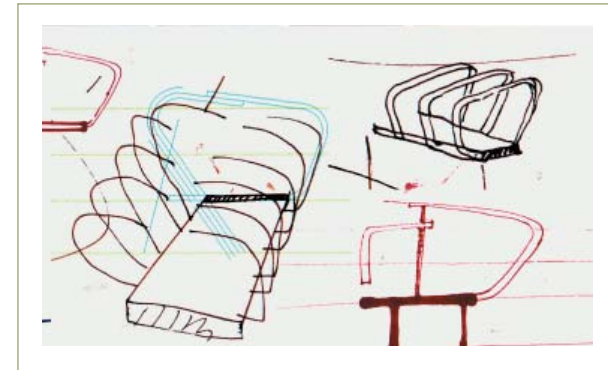
(5.127)

Figure (5.127):
Conceptual sketches investigating alternative loadbearing structures
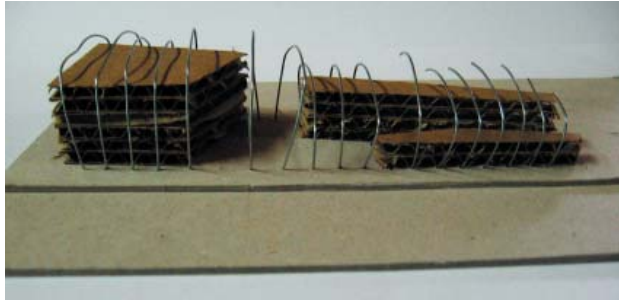
(5.128) Concept Models 4 - July 2007

(5.129) Concept Models 4 - July 2007

The influence of National School of Theater as precedent, can be directly linked to the investigation of this model (see pg. 94 and pg. 95). The articulated forms represent a model of controlled disruptive order. This contradiction between random appearances and a calculated order creates a paradoxical dynamism among the enclosed forms.
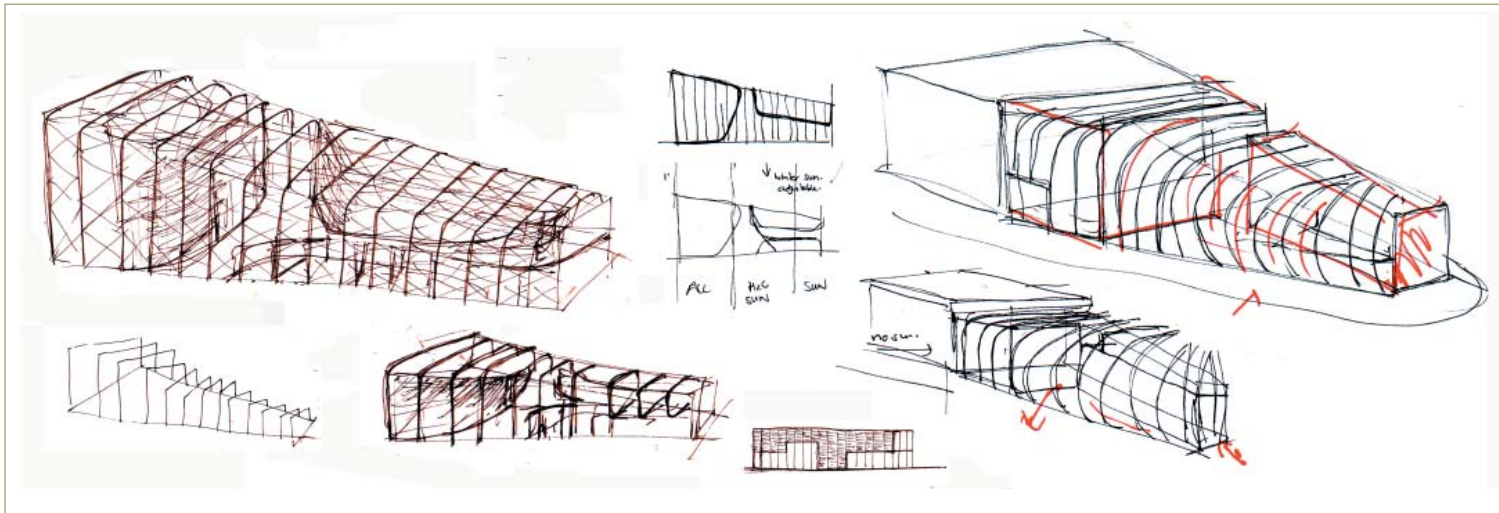
(5.130)

Figure (5.130): The sketches explore the relation between controlled space and random enclosure

Figure (5.131) & (5.132):
The sketches is part of the experimental model in figure on the following page

(5.131)
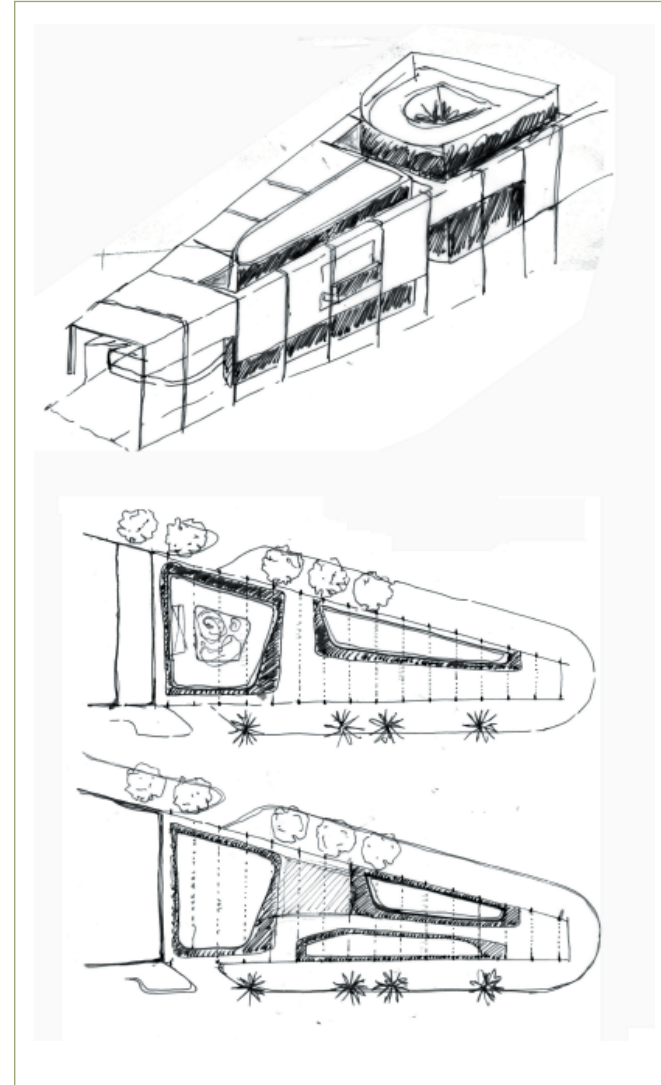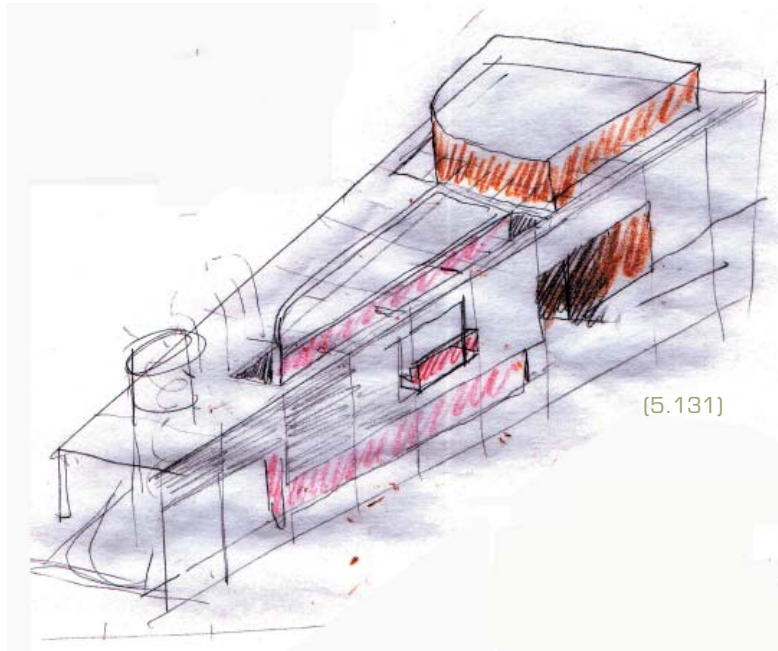
(5.132)

(5.133) Concept Models 4 - July 2007
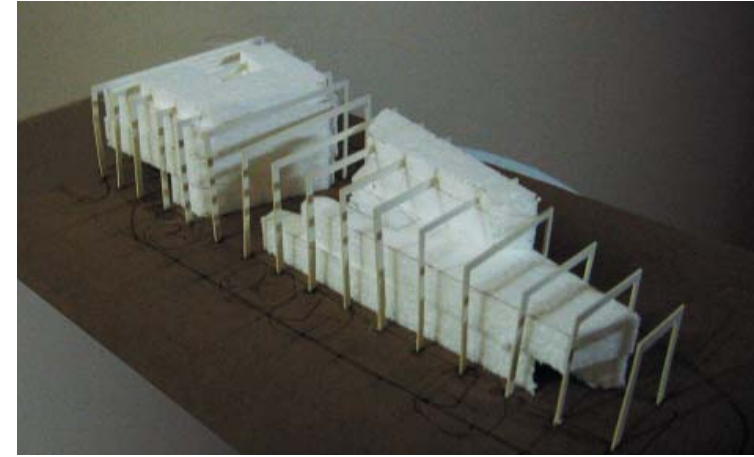
(5.134) Concept Models 4 - July 2007
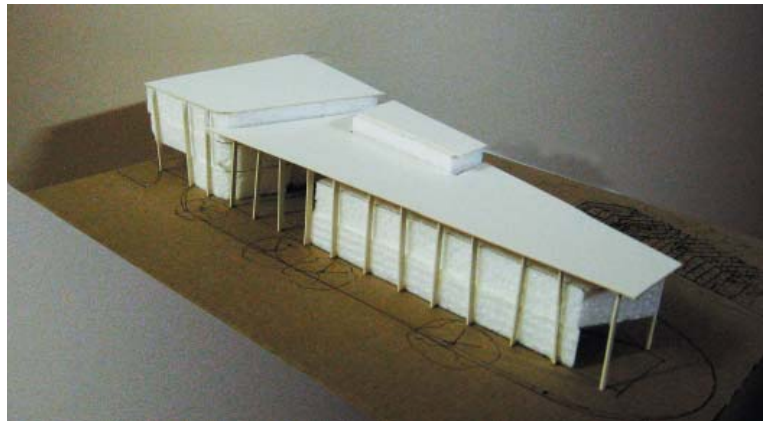
(5.135) Concept Models 4 - July 2007

(5.136) Concept Models 4 - July 2007

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UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
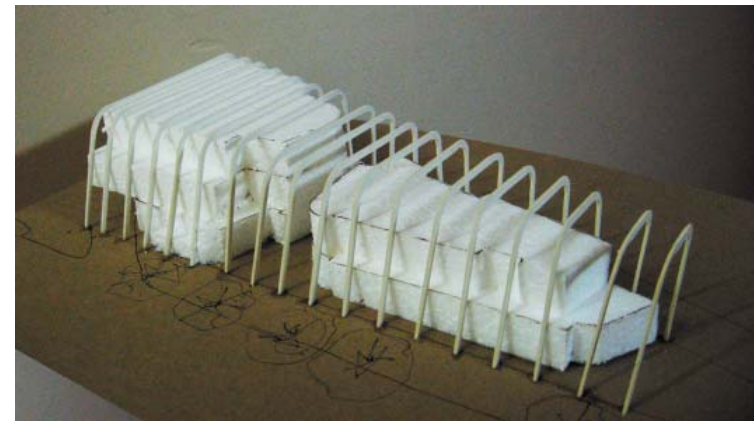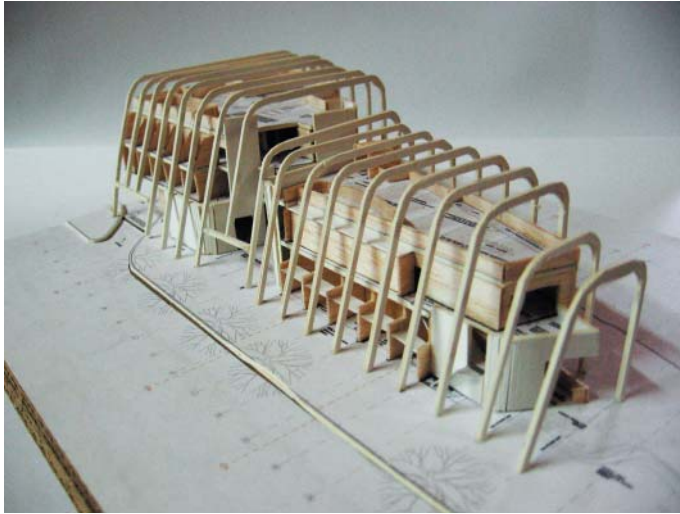
(5.137) Model 5 - September 2007
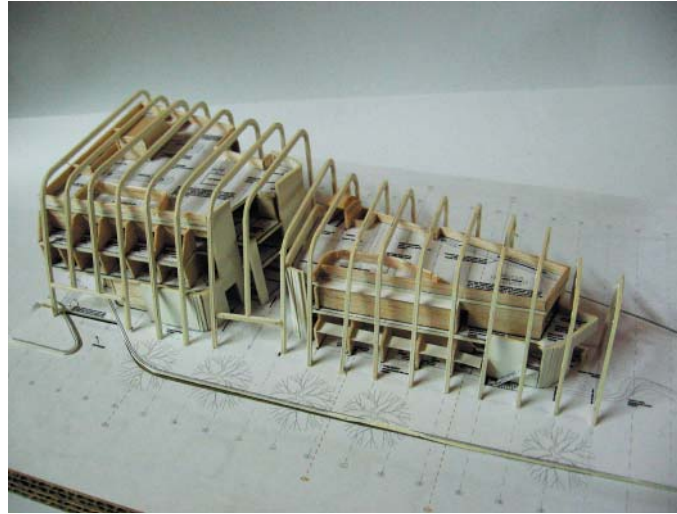
(5.138) Model 5 - September 2007

(5.139) Model 5 - September 2007
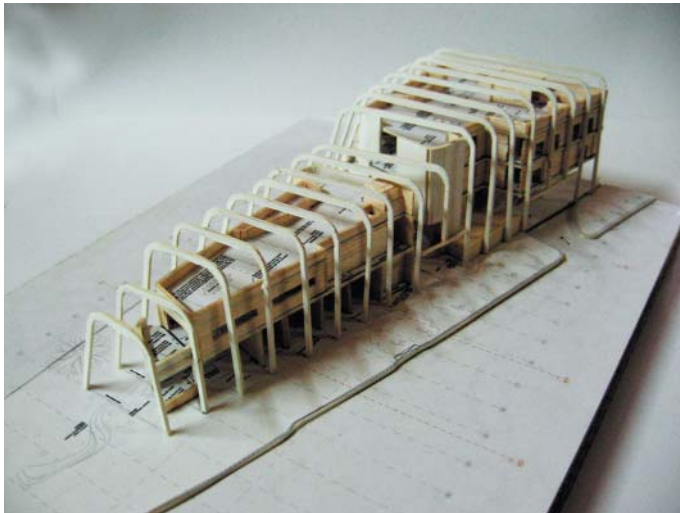
(5.140) Model 5 - September 2007

(5.141) Model 5 - September 2007
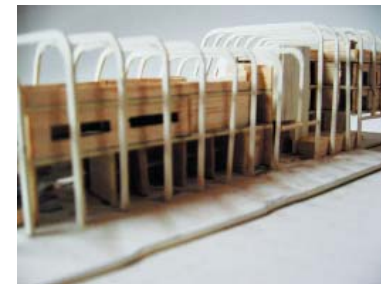
(5.142) Model 5 - September 2007

6

TRANSCRIBE

Conclusion

transcribe *vb* put into written form;
write out notes in full

The aim of this dissertation was to exploit the concept of social transition and the facilitation of basic accompanied needs experienced by people in transit through the translation of it in terms of an appropriate architectural intervention. The aim was to enrich the process of transition through re-delineating the transport interchange and promoting it as an activity node.

Challenged with aspects like identity and belonging, the discourse initiated another way of being by concretising phenomenological philosopher Martin Heidegger's notion of dwelling. It accordingly explored the contributions made by American architect Christopher Alexander, indicating important ways in which Heidegger's ideas on dwelling can be translated and implemented into more grounded architectural meaning.

The predominant quality which defines the intervention in relation to the discourse is the concept of the edge, border or boundary. The significance of the convergence of these concepts emphasises the 'beyond'. In the 'beyond' we find ourselves in a moment of transit, where space and time cross to produce conflict between difference and identity, past and present, inside and outside, inclusion and exclusion. This conflict is not given to experience through an already authenticated tradition, but it takes you 'beyond' yourself in order to return, in a spirit of revision and reconstruction, to the conditions of the present. It is in this sense that the boundary, or edge, becomes the place from which something begins its presencing:

The edge becomes a crossing point in the process of transit and therefore a meeting place, where interaction occurs between people, space and systems of life in constant transition. These crossing points are found everywhere within the city, and becomes important spot where action seems to concentrate itself. However, these nodes often lack adequate public facilities. The proposed intervention provides open public and social space for its users and allow for communal interaction. It furthermore provides a catalyst for dealing with public open space by becoming an important node where the relations of interaction can start to initiate a way of using the space, rather than just being a preconceived idea. The concepts explored could be applied on a larger scale throughout the city.

The edge becomes an in-between, functioning as un-programmed space; space to be appropriated by the user. The building acts as an envelope, creating spaces which allow activities to develop unofficially and spontaneously, while bearing a great sense of formality and certainty. The left-over spaces (voids), between the existing and the designed became the place of potential 'events'. Events being an 'indeterminate set of unexpected outcomes' (Tschumi 1994:13). Events are thus seen as the turning point; neither the beginning nor the end. In addition, the voids provide for a more legible space; one in which the building can be easily read and understood. The building and the spaces it creates, also offers flexibility for a variety of building functions while adhering to existing movement and functions around the site. A program is generated for a building through the superimposition of existing needs and processes experienced by its users on and around the site.

The edge becomes the generator of new events for this part of the city. The development provides urban renewal in an area in need of 'urgent urban intervention' (Tshwane ISDF, 2005). The intervention presents solutions for improving the quality of life for the users and visitors of this area and enhances its unique social, cultural and historical attributes. The building becomes a landmark, not only within the precinct by also within the wider context of the city itself, and can therefore become an important destination for tourists, inhabitants and commuters. The proposed intervention will hopefully uplift the area through stimulating commercial activity and encourage future investment. The functional diversity of the facilities, as a gateway for many people into the city, creates an overlay of systems, functions, hierarchy and order.

The edge itself manifests the border, reflecting the process of transition by initiating an alternative urban fabric; one in which the segregation of 'inside' and 'outside' is being enriched by a third dimension of the 'in-between.' The transition from the outside to the inside therefore evolves around being in the beyond, the 'unfamiliar', towards that which is known. Besides providing an enclosure, this transition between sidewalk and building acts as a multi layered threshold, introducing a variety of complementary functions. The permeability of the enclosure (structure) provides links with the surrounding fabric and promotes interlocking spaces and interaction between people. The structure varying in physical and visual permeability regulates these levels of interaction. It therefore not only manifests the transition between inside and outside, but also releases the boundaries between public and private to define spaces for this interaction.

Whereas transition, within the context of South Africa today, connotes a shift from political partition to universal acceptance and justice, the author aimed to intricate transition as a culture in its own right, with its own conflict, repressions and unrealised potentials. Within the realm of the 'beyond', this culture's existence is marked by a tenebrous sense of survival; living on the borderlines of the 'present'. The author concluded that the solution lies in our return to the present, to re-describe our cultural contemporaneity. In that sense then, the intervening space 'beyond', becomes a space of intervention in the here and now. The proposed facility demands an encounter with 'newness' that is not part of the continuum of past and present. It renews the past, refiguring it as a contingent 'in-between' space in constant transition, that innovates and interrupts the performance of the present.

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GROUP 4:		HERITAGE CONTEXT						
Description								
Building No	Building Type	(Architectural & Technical Description) Typology	Materials	Historical Value	Condition	Orientation	Function	Occupancy
De Waal street: is a short street between Boom & Mosca street. To the western side are high walls enclosing zoo buildings; small houses run along the eastern side, all set back the same distance from the street. Most houses are kept in the same original scale.								
1	house	single storey house with pointed corr iron roof & veranda supported by square timber poles. Concave florid end gable faces the street. Walls are plasteres & painted above a dado of red face brick.	timber, plasterd walls, corr iron		medium	W	dwelling	yes
2	house	one of the bigger dwelling houses in the area, built symmetrically around a central arched entrance. A (later added) veranda runs along the street fecade & side, supported by stone-built pillars. Roof ventilator faces the street. Two impressive, richly decorated timber windows on either side of the entrance on the veranda front.	timber, stone, plastered walls		medium	W	offices	yes
3	house	Symmetrical dwelling house covered by corr iron roof with central roof ventilator & ridge finials. The veranda rests on pre-built columns, resting on stone layer, forming part of the ballustrade wall.	stone, concrete, corr iron		good	W	dwelling	yes
Mosca street: today forms the back side of the U-shaped street with three names running through Riverdale. The zoo fence forms the northern boundary, on the southern side are two houses which have been changed quite severely.								
4 & 5	house	The two houses are linked by a later added addition. The one house is much more recent than the other one. Overall, the houses have be altered a lot over time.	plastered walls, corr iron, timber		good	W & N	hospice/ hospital	yes
Margaretha street: similar to De Waal street in terms of scale and appearance.								
6	house	House has undergone many alterations, but is important as a typical dwelling house.	plstrd walls, corr iron, concr		good	E	dwelling	yes
7	house	House has undergone many alterations, but is important as a typical dwelling house.	pntd stone, corr iron, pl walls		medium	E	dwelling	yes
8	house	Small house, without any well-preserved architectural characteristics. Typical street & scale relationship.	face brick,corr iron,plstrd walls		good	E	dwelling	yes
9	house	Symmetrical, semi-detached house under one uninterrupted corr iron roof. On either end foms a veranda, covered by the same roof. Walls are plastered & painted.	concr, corr iron, plstrd walls		good	E	dwelling	yes
10	house	Small house, without any well-preserved architectural characteristics. Typical street & scale relationship.	face brick,corr iron,plstrd walls		good	E	dwelling	yes
11	house	scale of the house and appearance resemble House No.36 in De Waal str.	corr iron, plstrd walls, timber		good	W	dwelling	yes
12	house	Small house, without any well-preserved architectural characteristics. Typical street & scale relationship.	pres ceil, corr i, plastrd walls		medium	W	dwelling	yes
13	house	House with gable facing the street, steep veranda on two sides. Corr iron roof. Vernda rests on pillars that form part of the ballustrade wall. Timber sash windows.	corr iron, plstrd walls, timber, concrete		medium	W	dwelling	yes
14	house	Big dwelling house with small corner-gable facing the street. The multi-facetted corr iron roof faces the the veranda, which runs along two sides of the house. Double timber & glass swing doors appear on the veranda.	concrete, corr iron, plstrd walls, timber		medium /low	W S-W	women clinic, surgery	yes

Riverdale Street is a smal residential are surrounded by the zoo, Mosca street, the old street wall next to Prinshof, Lewis and Boom street. Because heavy traffic does not pass through the area, the atmosphere is much quieter & it feels like having entered a different world. Riverdale was developed independant of the city pattern and thus the streets are smaller and do not line up with the surrounding pattern. Houses are generally small and unpretretentious. The placidness of the street is striking.

Boom street: the northern side of Boom street is characterized by open spaces leading through the unchannelled Apies river and up and over Daspoort Hill. As the street name indicates it, the street is lined on both sides with big Plantane trees. These tree rows originate at Von Willich str, through Marabastad and ends at the Du Toit, Bloed & Prinsloo crossing. The southern street scape is more commercial, while the northern side is quieter, embracing the zoo, Apies river, parking etc

15 & 16	house	Two bigger houses, which have been altered substantially and to which ugly additions have been added. Important as remaining wittness of scale & age of dwelling houses in Boom str., in comparison to those in Riverdale str.	face brick, corr iron, plstrd walls		medium	S	optometrist, dentist	yes

Lewis street: starts at Boom street and runs to the north. The residential scale is kept along Boom street, but as from Riverdale street bigger buildings and open fields appear next to the road.

17	house	Small dwelling house, covered by a pointed corr iron roof. Big, tri-angular roof ventilators sit on every side of the roof. A veranda, facing the street rests on columns. This house, in spirit & scale, is one of the most important buildings in the area.	corr iron, timber, face brick, plstrd walls		good	E	dwelling	yes
18	3-storey flats	Three-storey building with court yard. Exterior walls consist of two colours face brick; corr iron roof. Sombre Art Deco & International influence, seen at the heavy roof line which reminds of Frank Lloyd Wright's Prairie House. Typologically important as human- frindly & multi-storeyed dwelling unit in the city.	face brick, concr, steel		good	N	Flats: Flora Court	yes

Andries street: is a typical one-way street in Pretoria, but has a very important origin: the T-junction at Boom street, where the old Museum sits next to the zoo. A pity that the importance of the building gets lost. Spaces are determined by the changing context, such that the pedestrian roads change from wide to narrow, tree-lined to open, residential to commercial. Jacarandas line the street up to Vermeulen to soften the street scape.

19	house	Simple single storey house with with front & back verandas. Front veranda with plastered walls and low wall with etched edge strip. Plastered walls with stone plinth, timber windows and -floor.	concr, pressed ceiling, plstrd walls, corr iron		medium /low	N & W	dwelling	yes
20	house	Symetrical semi-detached house with corr iron roof. Plastered & painted walls on painted face brick plinth. Timber windows, purple steel ceiling. The total house consists of a T-shape. A veranda runs along three sides of the house, supported by pre-built columns.	face brick, concrete, plstrd walls, corr iron		good	N & W	dwelling	yes
21	house	Typical Edwardian village house with some exeptions in character. Gable wall & 'erker' face the street. Corr iron roof; face brick and painted, plastered walls with ledge all on painted stone plinth. Timber windows & louvres. Kirkness brick edging in garden.	face brick, plstrd walls, corr iron, timber		good	W	dwelling	yes

22	house	Single storey dwelling house with corr iron rof. Gable wall with 'erker'windows facing the street. Veranda with pre-fab columns on square bases and lean-to roof. The veranda stretches fron the the entrance along the house front & around the corner. The exterior walls consists of plastered strips and face brick (now all painted) on painted stone plinth. Timber windows with arched stone work as lintels. late Victorian/ Edwardian house with numerous original details. Outdoor building with loft window and double-pitched roof.	plstrd walls, corr iron, timber	▬	medium	E	Centre for SA radio league	yes
23	7-storey flats	7-storey flat building. This building places an unsympathetic focus on the way the streets join.	face brick, plstrd walls	▬	good	N	Flats	yes
24	courtyard bldg	Built ca. 1899. The old musem front is on the property of the zoo. The entrance gate under a semi-round 'timpaan' of sand stone is in the centre of the symmerical façade between two richly decorated pavilions stretching high above the lower corr iron roofs of the museum buildings. Sand stone cut work appears on the pavilions, at the top corinthian capitals & pillars. Prominent triangular roof ventilators appear at measured distances on the museum roof. A very important city land mark!	concrete, corr iron	▬	low	S	Museum	no
25	2-storey dwelling	one of the first residential houses next to the zoo. House has interesting cottage-type characteristics, but lacks serious maintenance. Seems fairly unchanged over the years, although a bit ad-hoc. The white painted plastered walls are partly covered by a climbing plant.	painted face brick walls, tile roof, timber	▬	medium/ low	W	storage	no

Bloed street: the corner café at the Boom/Bloed/Prinsloo street crossing is an important architectural apearance and although this example is not very dramatic, it remains important as a typological example of smaller business buildings of the bazaar era. Characteristics such as the covered verandas and corner entrances are generally kept in resonable condition. Bloed street is characterized by by its big Jacaranda trees along side the street sides and low buildings adjacent to the street. Side walks are generally dirty and not well looked after, although lively. Two unbuilt stands on the northern side of the street result in a big gap in the city fabric. Splashes of colour and advertisements on the southern side, confuse to lead the eye to small single- and double storey buildings.

GROUP 4: HERITAGE CONTEXT

Description

Bldg No	Addr.	Photos	Bldg No	Addr.	Photos
1	De Waal str 34. Erf no: 2025		6	Margaretha str 45. Erf no: 2010	
2	De Waal str 36. Erf no: 2021		7	Margaretha str 39. Erf no: 2022	
3	De Waal str 40. Erf no: 2013		8	Margaretha str 31. Erf no: 2034	
4 & 5	Mosca str 50 & 281. Erf no: 2001 & 3027		9	Margaretha str 27. Erf no: 2031	

10	Margaretha str 25. Erf no: 2038			14	Margaretha str 2. Erf no: 2065
11	Margaretha str 28. Erf no: 2035			15 & 16	Boom str 306 & 310. Erf no: 2242 & 2241.
12	Margaretha str 16. Erf no: 1/2051			17	Lewis str 8. Erf no: 3183
13	Margaretha str 12. Erf no: 2055			18	Boom str 257. Erf no: 3057

19	Andries str 2. Erf no : 3135.			23	Boom str 245. Erf no: 2863		
20	Andries str 4 & 8. Erf no : 3135.			24	Boom str (next to zoo) Erf no: R/17		
21	Andries str 12. Erf no :3135			25	Boom str 272. Erf no :3389		
22	Andries str 11. Erf no: 847/1				Margaretha street scape & Bloed street Corner Café		

SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT - P) V1
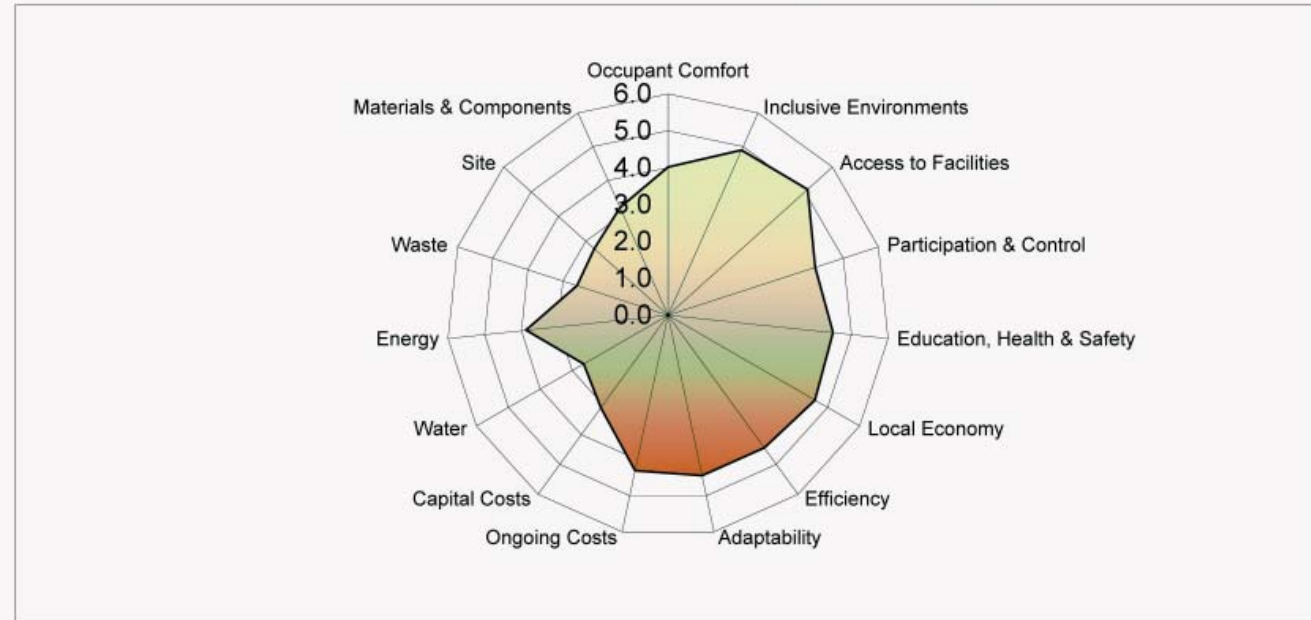
Social	4.5

Economic	4.2

Environmental	3.0

Overall	3.9

Building Performance - Social

	Criteria	Indicative performance measure	Measured	Points
SO 1	**Occupant Comfort**	**Explanatory notes**		**4.0**
SO 1.1	Daylighting	% of occupied spaces that are within distance 2H from window, where H is the height of the window or where there is good daylight from skylights	80	0.8
SO 1.2	Ventilation	% of occupied spaces have equivalent of opening window area equivalent to 10% of floor area or adequate mechanical system, with upolluted air source	78	0.8
SO 1.3	Noise	% of occupied spaces where external/internal/reverberation noise does not impinge on normal conversation (50dbA)	66	0.7
SO 1.5	Thermal comfort	Tempreture of occupied space does not exceed 28 or go below 19oC for less than 5 days per year (100%)	88	0.9
SO 1.5	Views	% of occupied space that is 6m from an external window (not a skylight) with a view	90	0.9
SO 2	**Inclusive Environments**	**Explanatory notes**		**4.9**
SO 2.1	Public Transport	% of building (s) within 400m of disabled accessible (20%) and affordable (80%) public transport	100	1.0
SO 2.2	Information	Comprehensive signage provided (50%), Signage high contrast, clear print signage in appropriate locations and language(s) / use of understandable symbols / manned	100	1.0
SO 2.3	Space	% of occupied spaces that are accessible to ambulant disabled / wheelchair users	100	1.0
SO 2.4	Toilets	% of occupied space with fully accessible toilets within 50m along easily accessible route	100	1.0
SO 2.5	Fittings & Furniture	% of commonly used furniture and fittings (reception desk, kitchenette, auditorium) fully accessible	90	0.9
SO 3	**Access to Facilities**	**Explanatory notes**		**5.1**
SO 3.1	Children	All users can walk (100%) / use public transport (50%) to get to their childrens' schools and creches	100	1.0
SO 3.2	Banking	All users can walk (100%) / use public transport (50%) to get to banking facilities	100	1.0
SO 3.3	Retail	All users can walk (100%) / use public transport (50%) to get to food retail	100	1.0
SO 3.4	Communication	Percentage of inhabitants who walk / use public transport to get to post office / telephone / internet	80	0.8
SO 3.4	Communication	All users can walk (100%) / use public transport (50%) to get to communication facilities (post/telephone/internet)	100	1.0
SO 3.5	Exercise	All users can walk (100%) / use public transport (50%) to get to recreation/excercise facilities	30	0.3
SO 4	**Participation & Control**	**Explanatory notes**		**4.2**
SO 4.1	Environmental control	% of occupied space able to control their thermal environment (adjacent to openable windows/thermal controls)	80	0.8
SO 4.2	Lighting control	% of occupied space able to control their light (adjacent to controllable blinds etc/local lighting control)	80	0.8
SO 4.3	Social spaces	Social informal meeting spaces (parks / staff canteens / cafes) provided locally (within 400m) (100%)	90	0.9
SO 4.4	Sharing facilties	5% or more of facilities shared with other users / organisations on a weekly basis (100%)	100	1.0
SO 4.5	User group	Users actively involved in the design process (50%) / Active and representative management user group (50%)	70	0.7
SO 5	**Education, Health & Safety**	**Explanatory notes**		**4.5**
SO 5.1	Education	Two percent or more space/facilities available for education (seminar rooms / reading / libraries) per occupied space (75%). Construction training provided on site	75	0.8
SO 5.2	Safety	All well used routes in and around building well lit (25%), all routes in and around buildings visually supervised (25%), secure perimeter and access control (50%), No	75	0.8
SO 5.3	Awareness	% of users who can access information on health & safety issues (ie HIV/AIDS), training and employment opportunities easily (posters/personnel/intranet site)	100	1.0
SO 5.4	Materials	All materials/components used have no negative effects on indoor air quality (100%)	100	1.0
SO 5.5	Accidents	Process in place for recording all occupational accidents and diseases and addressing these	100	1.0

Building Performance - Economic

	Criteria	Indicative performance measure	Measured	Points
EC 1	**Local economy**	**Explanatory notes**		**4.6**
EC 1.1	Local contractors	% value of the building constructed by local (within 50km) small (employees<20) contractors	80	0.8
EC 1.2	Local materials	% of materials (sand, bricks, blocks, roofing material) sourced from within 50km	80	0.8
EC 1.3	Local components	% of components (windows, doors etc) made locally (in the country)	100	1.0
EC 1.4	Local furniture/fittings	% of furniture and fittings made locally (in the country)	100	1.0
EC 1.5	Maintenance	% of maintenance and repairs by value that can, and are undertaken, by local contractors (within 50km)	100	1.0
EC 2	**Efficiency**	**Explanatory notes**		**4.4**
EC 2.1	Capacity	% capacity of building used on a daily basis (actual number of users / number of users at full capacity*100)	89	0.9
EC 2.2	Occupancy	% of time building is occupied and used (actual average number of hours used / all potential hours building could be used (24) *100)	85	0.9
EC 2.3	Space per occupant	Space provision per user not more than 10% above national average for building type (100%)	80	0.8
EC 2.4	Communication	Site/building has access to internet and telephone (100%), telephone only (50%)	100	1.0
EC 2.5	Material & Components	Building design coordinated with material / component sizes in order to minimise wastage. Walls (50%), Roof and floors (50%)	90	0.9
EC 3	**Adaptability**	**Explanatory notes**		**4.4**
EC 3.1	Vertical heights	% of spaces that have a floor to ceiling height of 3000mm or more	75	0.8
EC 3.2	External space	Design facilitates flexible external space use (100%)	100	1.0
EC 3.3	Internal partition	Non loadbearing internal partitions that can be easily adapted (loose partioning (100%), studwall (50%), masonary (25%)	66	0.7
EC 3.4	Modular planning	Building with modular stucture, envelope (fenestration) & services allowing easily internal adaptaptation (100%)	100	1.0
EC 3.5	Furniture	Modular, limited variety furniture - can be easily configured for different uses (100%)	100	1.0
EC 4	**Ongoing costs**	**Explanatory notes**		**4.3**
EC 4.1	Induction	All new users receive induction training on building systems (50%), Detailed building user manual (50%)	100	1.0
EC4.2	Consumption & waste	% of users exposed on a monthly basis to building performance figures (water (25%), electricity (25%), waste (25%), accidents (25%)	60	0.6
EC 4.2	Metering	Easily monitored localised metering system for water (50%) and energy (50%)	90	0.9
EC4.3	Maintenance & Cleaning	% of building that can be cleaned and maintained easily and safely using simple equipment and local non-hazardous materials	90	0.9
SO 4.5	Procurement	% of value of all materials/equipment used in the building on a daily basis supplied by local (within the country) manufacturers	90	0.9
EC 5	**Capital Costs**	**Explanatory notes**		**3.1**
EC 5.1	Local need	Five percent capital cost allocated to address urgent local issues (employment, training etc) during construction process (100%)	80	0.8
EC5.2	Procurement	Tender / construction packaged to ensure involvement of small local contractors/manufacturers (100%)	80	0.8
EC 5.3	Building costs	Capital cost not more than fifteen % above national average building costs for the building type (100%)	50	0.5
EC5.4	Technology	3% or more of capital costs allocated to new sustainable/indigenous technology (100%)	80	0.8
EC 5.5	Existing Buildings	Existing buildings reused (100%)	20	0.2

Building Performance - Environmental

	Criteria	Indicative performance measure	Measured	Points
EN 1	Water	Explanatory notes		2.6
EN 1.1	Rainwater	% of water consumed sourced from rainwater harvested on site	30	0.3
EN 1.2	Water use	% of equipment (taps, washing machines, urinals showerheads) that are water efficient	100	1.0
EN 1.3	Runoff	% of carparking, paths, roads and roofs that have absorbant/semi absorbant/permeable surfaces (grassed/thatched/looselaid paving/ absorbant materials)	20	0.2
EN 1.4	Greywater	% of water from washing/relatively clean processes recycled and reused	34	0.3
EN 1.5	Planting	% of planting (other than food gardens) on site with low / appropriate water requirements	80	0.8
EN 2	Energy	Explanatory notes		3.9
EN 2.1	Location	% of users who walk / cycle / use public transport to commute to the building	90	0.9
EN 2.2	Ventilation	% of building ventilation requirements met through natural / passive ventilation	75	0.8
EN 2.3	Heating & Cooling	% of occupied space which relies solely on passive environmental control (no or minimal energy consumption)	70	0.7
EN 2.4	Appliances & fittings	% of appliances / lighting fixtures that are classed as highly energy efficient (ie energy star rating)	100	1.0
EN 2.5	Renewable energy	% of building energy requirements met from renewable sources	53	0.5
EN 3	Waste	Explanatory notes		2.6
EN 3.1	Toxic waste	% of toxic waste (batteries, ink cartridges, flourescent lamps) recycled	80	0.8
EN 3.2	Organic waste	% of organic waste recycled	80	0.8
EN 3.3	Inorganic waste	% of inorganic waste recycled.	50	0.5
EN 3.4	Sewerage	% of sewerage recycled on site	0	0.0
EN 3.5	Construction waste	% of damaged building materials / waste developed in construction recycled on site	50	0.5
EN 4	Site	Explanatory notes		2.7
EN 4.1	Brownfield site	% of proposed site already disturbed / brownfield (previously developed	80	0.8
EN 4.2	Neighbouring buildings	No neighbouring buildings negatively affected (access to sunlight, daylight, ventilation) (100%)	75	0.8
EN 4.3	Vegetation	% of area of area covered in vegetation (include green roofs, internal planting) relative to whole site	15	0.2
EN 4.4	Food gardens	Food gardens on site (100%)	0	0.0
EN 4.5	Landscape inputs	% of landscape that does not require mechanical equipment (ie lawn cutting) and or artificial inputs such as weed killers and pesticides	100	1.0
EN 5	Materials & Components	Explanatory notes		3.2
EN 5.1	Embodied energy	Materials with high embodied energy (aluminium,plastics) make up less than 1% of weight of building (100%	100	1.0
EN 5.2	Material sources	% of materials and components by volume from grown sources (animal/plant)	50	0.5
EN 5.3	Ozone depletion	No materials and components used requiring ozone depleting processes (100%)	80	0.8
EN 5.4	Recyled / reuse	% of materials and components (by weight) reused / from recycled sources	30	0.3
EN 5.5	Construction process	Volume / area of site disturbed during construction less than 2X volume/area of new building (100%)	60	0.6
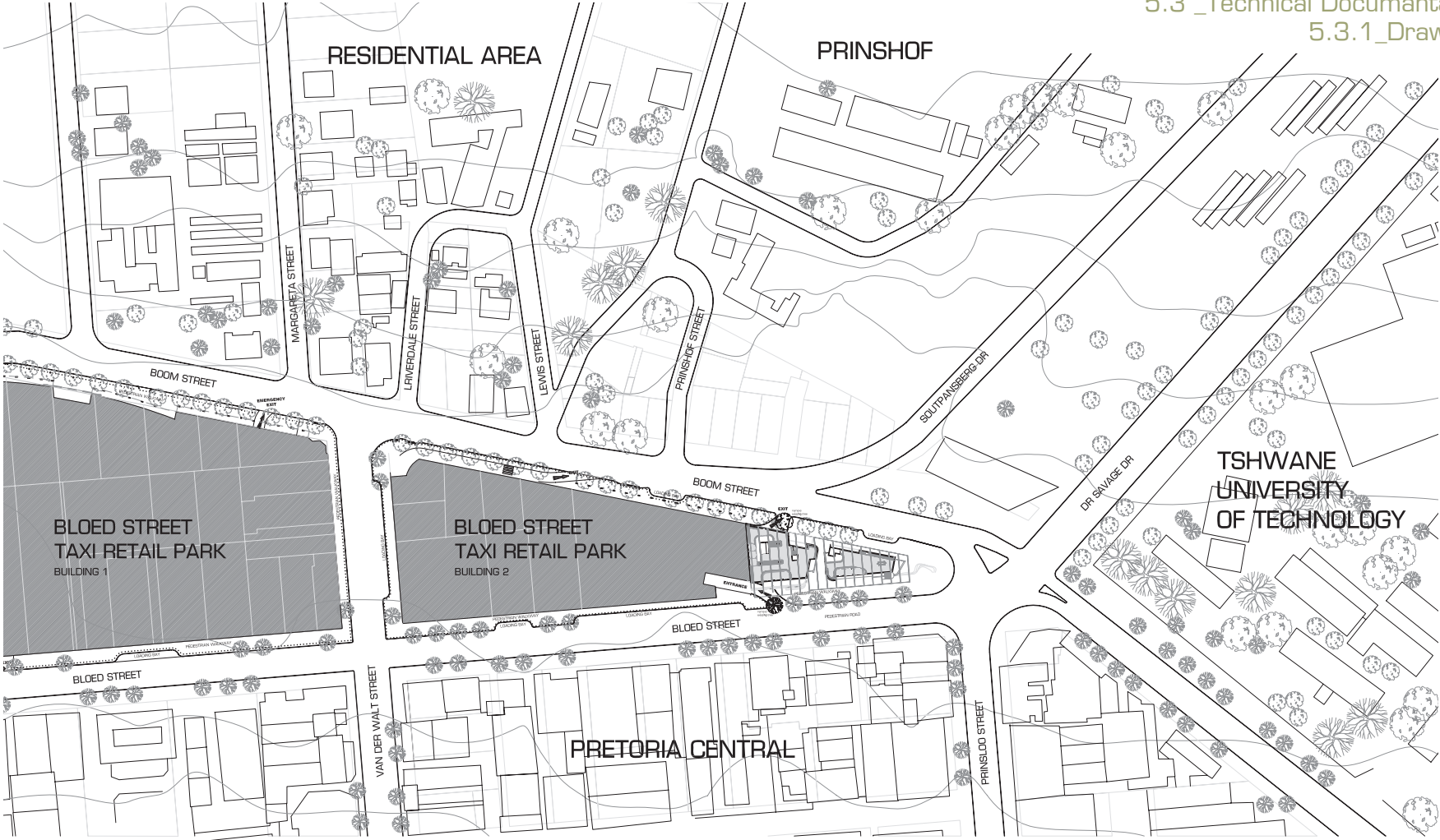
RESIDENTIAL AREA

PRINSHOF

TSHWANE
UNIVERSITY
OF TECHNOLOGY

MARGARETA STREET

LAVERDALE STREET

LEWIS STREET

PRINSHOF STREET

SOUTPANSBERG DR

DR SAVAGE DR

BOOM STREET

BOOM STREET

BLOED STREET
TAXI RETAIL PARK
BUILDING 1

BLOED STREET
TAXI RETAIL PARK
BUILDING 2

EXIT

ENTRANCE

BLOED STREET

BLOED STREET

VAN DER WALT STREET

PRETORIA CENTRAL

PRINSLOO STREET

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Transpace: an architectural intervention for people in transition

50m   100m

N

Site Plan Wider Context

(5.143

FUTURE
DEVELOPMENT

FUTURE
DEVELOPMENT

PRINSHOF STREET

SOUTPANSBERG DR

DR SAVAGE DR

BOOM STREET

LOADING BAY

EXIT remove
existing tree

LOADING BAY

BLOED STREET
TAXI RETAIL PARK

BUILDING 2

ENTRANCE

PEDESTRIAN WALKWAY

remove
existing tree

LOADING BAY

PEDESTRIAN ROAD

BLOED STREET

PRINSLOO STREET

FUTURE
DEVELOPMENT

50m   100m

N Site Plan Immediate Context

(5.144)

CONCRETE RAMP

PARKING BASEMENT
TOTAL PARKING BAYS = 40

LOBBY
entrance to building A

LOBBY
entrance to building B

MECHANICAL
ROOM

STORE ROOM

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Transpace: an architectural intervention for people in transition

5m   10m   20m   N

Basement Plan

(5.145)

5.3.1 Transfigure_Technical Documantation_Drawings   160

Ground Floor Plan

5m 10m 20m N

(5.146)

First Floor Plan

5m   10m   20m   N

(5.147)

Second Floor Plan

5m   10m   20m   N

(5.148)

Roof Plan

(5.149)

Roof garden

Tea kitchen

Smoking balcony/Fire escape

Open plan offices

Commercial

Passage
to restrooms

Commercial
Coffee shop bar

Parking basement

5m   10m

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Section A-A

(5.150)

Section B-B

Roof garden

Male

Staircase and lift

Smoking balcony

Open plan offices

Commercial

Commercial
Retable space

Office space
Building manager

Parking basement

Staircase and lift shaft

5m   10m   N

(5.151)

Roof garden

Roof garden

Duct and stairs behind

Balcony youth hostel

Kitchen youth hostel

Bedroom 4

Office
General

Reception office
clinical testing

Reception office
x-ray department

Waiting area
x-ray

Kitchen
Preparation area

Cafeteria
serving

Cafeteria
dining

Cafeteria
outside patio

Window
seating

Entrance to
parking
basement

Mechanical room

Parking basement

5m   10m

N

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Transpace: an architectural intervention for people in transition

Section C-C

(5.152)
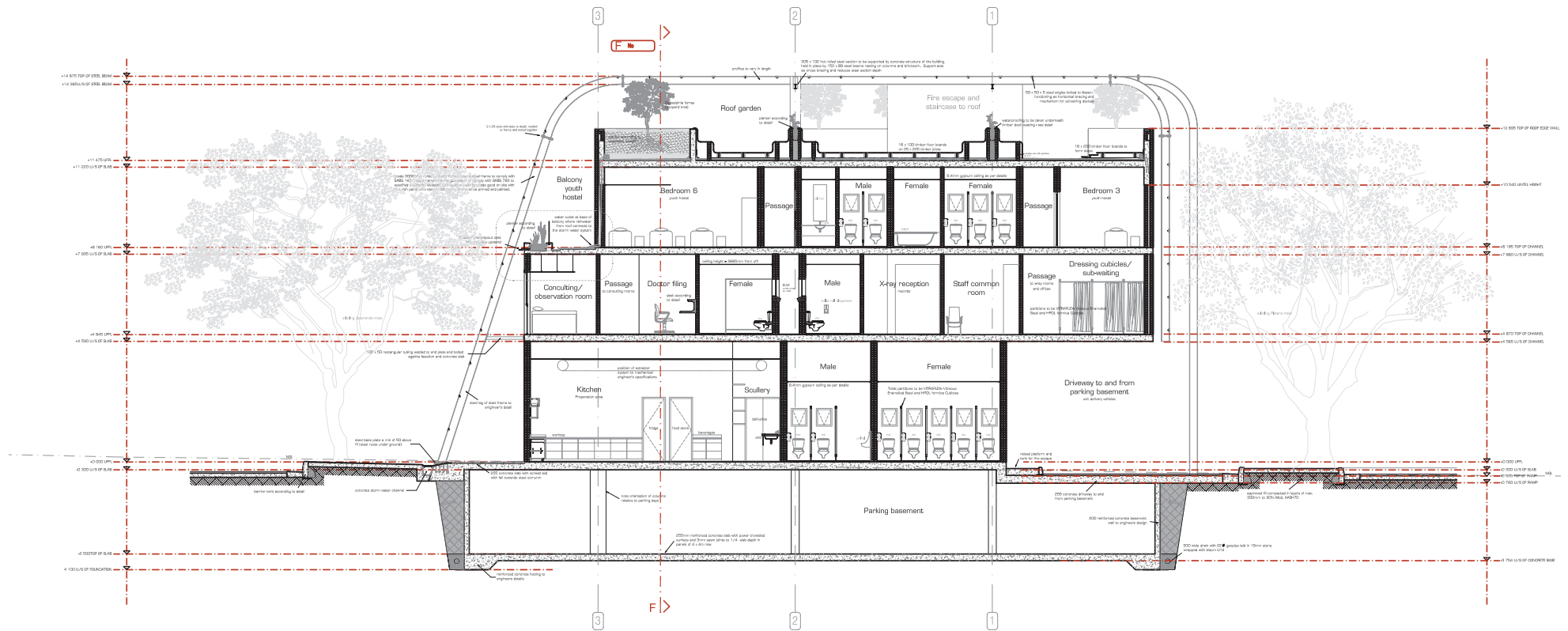
Section D-D

Roof garden

Fire escape and
staircase to roof

Balcony
youth
hostel

Bedroom 6
youth hostel

Passage

Male

Female

Female

Passage

Bedroom 3
youth hostel

Conculting/
observation room

Passage
to consulting rooms

Doctor filing

Female

Male

X-ray reception
records

Staff common
room

Passage
to relay rooms
and offices

Dressing cubicles/
sub-waiting

Kitchen
Preparation area

Scullery

Male

Female

Driveway to and from
parking basement
sub delivery vehicles

Parking basement

5m   10m

N

(5.153)

Section F-F

(5.154)

5m   10m

Southern Elevation

Northern Elevation

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Transpace: an architectural intervention for people in transition

Sectional Elevations

(5.155)

steel frame to enigineer's details

2 x 25 steel end plate to detail, welded to frame and bolted together

frame welded to endplate

varying steel web

25 steel flange

Isometric view of end plate

frame welded to end plate

end plates bolted together

frame welded to end plate

Exploded view showing end plate connection

profiles to be identical for each section

steel frame to enigineer's details

endplate to be bolted from top to bottom to avoid 'peeling' effect

min 50

profiles to vary in length

2 x 25 steel end plate to detail, welded to frame and bolted together

Elevation showing end plate connection

Details showing end plate connection

Scale 1:20

(5.156)

plaster on top of wall to slope towards roof
to allow water run-off

Geoflex acrylic waterproofing system to parapet
dressed down over counter flashed Derbigum turnup

permanent steel formwork to support brickwork

brick cavity wall to be plastered and painted

concrete upturn by engineers design

counter flashing

cast iron rainwater outlet positioned against chamfered corner,
head and outlet threaded to take an 80 dia. mild steel
galvanised pipe. outlet to be covered with domical removable
grating, secured by a single centre hook bolt

16 x 100 timber floor boards on 25 x 225 timber joists

one layer Derbigum SP4 waterproofing membrane, with
75mm side laps, sealed by 'torchfusion' to side and top of
upstand. Waterproofing to be taken to underside of Geoflex
acrylic waterproofing system

cement screed laid to fall towards outlets,
refer to roof plan

25mm ISOBOARD insulation as per engineer

Flanged rainwater outlet sandwiched
between waterproofing

reinforced concrete roof slab as per
engineer

downpipe to be built into wall

DONN tea piece as per manufacturers
specification

6,4mm rhinoboard ceiling, skimmed and painted, installed
as per suppliers specification
ceiling height = 2350mm from uffl.

steel angle to support brickwork and acting
as water drip, detail as per engineer

door frame as per schedule

drip

roof edge and outlet detail
scale 1:20

BPB Gypsum 47 x 35mm SM25 recessed
shadowline wall angle (Code : LSM25)
plugged and screwed to wall

DONN tea piece as per manufacturers
specification

6,4mm rhinoboard ceiling, skimmed and
painted, installed as per suppliers
specification

All joints to be covered with Rhinotape fixed over
joints (double over butt joints) and then plastered with
3mm to 6mm thick Rhinolite gypsum skim plaster

All corners to receive a plaster bead prior to Rhinolite

TYPICAL SUSPENDED CEILING DETAIL
scale 1:5

SMARTGLASS laminated safety glass
balustrade to manufacturers specification

plaster and top of concrete edge to slope
towards balcony to allow water run-off

Geoflex acrylic waterproofing system
to parapet dressed down over
counter flashed Derbigum turnup

Ø 50mm steel waterspout cast
into concrete upstand

Derbigum SP4 sealed to primed screed
and turned up over cove/fillet at uprights

cement screed laid to fall

25mm ISOBOARD insulation as per Engineer

reinforced concrete roof as per engineer

rainwater drip

water spout and balustrade detail
scale 1:20

concrete roof and stepped wall detail
scale 1:20

openable window according to manufacturers specification

wall stepped back according to detail

top of concrete sill edge to slope towards roof to allow water run-off

Derbigum SP4 sealed to primed screed and turned up underneath cove/fillet at uprights

cement screed laid to fall

alluminium parapet edge trimming, bolted to concrete slab, functioning as rainwater drip and edge stop for waterproofing

HILLALDAM FOLDASIDE 235 top hung aluminium folding door

balustrade detaill
scale 1:20

SMARTGLASS laminated safety glass balustrade to manufacturers specification

25 base plate bolted to concrete upstand

Geoflex acrylic waterproofing system to parapet dressed down over counter flashed Derbigum turnup

Derbigum SP4 sealed to primed screed and turned up over cove/fillet at uprights

25mm ISOBOARD insulation as per Engineer

cement screed laid to fall

reinforced concrete roof as per engineer

rainwater catchpit with fall towards downpipe - see plan for position

rainwater drip

Semi flexible vinyl floor tiles 300 x 300 x 2.0mm thick

VINYL TILE

SLATE TILE

Aluminium straight edge M.Trim 17mm depth between two tiles, fixed as per manufacturers specifications

600 x 600 midnight black honed slate tiling on 6mm GOLDSTAR tile adhesive and 6mm dove grey TAL wall and floor grout with black silicon joints where indicated

50mm cement screed on reinforced concrete slab

TYPICAL THRESHOLD SLATE TILE AND VINYL TILE

plan of steel base plate

HILLALDAM FOLDASIDE
235, top hung aluminium
folding door

serving counter according to detail

steel leg of steel frame
to engineer's details

5 stainless steel bolt cap
epoxyed to base plate

25 steel base plate
to detail

30 bedding grout to
secure bolts

steel base plate a min of 50 above
ffl (steel rusts under ground)

THRESHOLD DETAIL B

255 concrete slab with screed laid
with fall towards steel comumn

approved fill compacted in
layers of max. 300mm to
90% Mod. AASH70

255x50mm steel grid on
50x50x3mm
equal angle mild steel
anchored in 340 dia.
concrete stormwater
channel
concrete storm water
channel

reinforced concrete footing to engineers design

anchors to stabilise excavation face

20mm bitumen impregnated soft board

reinforced concrete retaining wall according
to engineers details

ground filling

PARKING BASEMENT

Geoflex acrylic waterproofing
system by specialist

300 wide drain

300 wide drain with 22Ø
geopipe laid in 19mm stone,
wrapped with bidum U14

one layer Derbigum SP4 waterproofing membrane,
with 75mm side laps, sealed by 'torchfusion'

reinforced concrete column to
engineers specificaiton

255mm reinforced concrete slab with power
trowleled surface and 3mm sawn joints to
1/4 slab depth in panels of 4 x 4m max

reinforced concrete column
footing to engineers details

Steel frame and basement detail
scale 1:50

PAVELITE to match the colour of the
power floated floor

Hillaldam Coburn Systems foldaside
235 sliding door hardware

Cement screed to be feathered back
with PAVELITE 3m from edge to
accommodate level change

Aluminium sliding track as per
manufacturers specifications

CEMENT SCREED

SLATE TILE

Black silicon joint where tile meets
aluminium track

600 x 600 midnight black honed slate
tiling on 6mm GOLDSTAR tile adhesive
and 6mm dove grey TAL wall and floor
grout with black silicon joints where
indicated

50mm cement screed on reinforced
concrete slab

TYPICAL THRESHOLD SLATE TILE AND
CEMENT SCREED AT DOOR EDGE
scale 1:15

Hillaldam Coburn Systems foldaside
235 sliding door hardware

Black silicon joint where paver
meets aluminium track

Corobrik clay paving brick, size 220
x 110 x 50mm thick laid in stack
bond pattern on Tylon Ultra-flex 24
dove grey adhesive

Aluminium sliding track as per
manufacturers soecifications

CLAY PAVER

SLATE TILE

Black silicon joint where tile meets
aluminium track

600 x 600 midnight black honed slate
tiling on 6mm GOLDSTAR tile adhesive
and 6mm dove grey TAL wall and floor
grout with black silicon joints where
indicated

50mm cement screed on reinforced
concrete slab

Approved waterproofing taken
underneath aluminium track

ALTERNATIVE WITH
CLAY PAVERS

TYPICAL THRESHOLD SLATE TILE AND
CLAY PAVER AT DOOR EDGE
scale 1:15

50x8mm thick M.S. flat, cut & welded as shown, to form balustrades. All weld joints to be finished absolutely smooth with grinder. Finish with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect

50x10mm thick M.S. flat, cut & welded as shown, to form intermediate vertical stanchions. To be welded in position on top of fixing lug. All weld joints to be finished absolutely smooth with grinder. Finish with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect

plaster to top of wall to slope towards roof to allow water run off

Ø8mm, galvanised, M.S. solid round, cut & welded as shown, to form fixing lug - epoxy into brickwork as shown min. 75mm deep to take vertical stanchion welded to it. All weld joints to be finished absolutely smooth with grinder. Finish any exposed steel with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect.

Geoflex acrylic waterproofing system to parapet dressed down over counter flashed Derbigum turnup

brick cavity wall to be plaster and paint

concrete upturn by engineers design

counter flashing

chamfered corner

one layer geotextile to protect Derbigum SP4 waterproofing membrane

One layer Derbigum SP4 waterproofing membrane, with 75mm side laps, sealed by 'torchfusion' to side and top of upstand. Waterproofing to be taken to underside counter flashing

cement screed laid to fall to outlets,refer to roof plan

25mm ISOBOARD insulation as per Engineer

reinforced concrete roof slab as per Engineer

No ceiling and paint underside reinforced concrete slab, colour white. Refer to finishing schedule for paint specification

counter flashing

refer to manufacturers details

Glazing Vision Flush glaze Series 501 fixed skylight with single glazed 8.76mm thick clear laminated PVB safety glass with extruded aluminium cill profile frame in black polyester powder coated aluminium including flashing and counter-flashing , all in accordance with manufacturer's instructions and left perfectly watertight on completion

concrete upturn by engineers design

opening in slab for roof light

angle to support roof light, detail as per engineer

reinforced concrete roof slab as per engineer

skylight and upstand detaill
scale 1:20

2 x 25 steel end plate to detail, welded to frame and bolted together

Caesalpinia ferrea (Leopard tree)

50x8mm thick M.S. flat, cut & welded as shown, to form balustredes. All weld joints to be finished absolutely smooth with grinder. Finish with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect.

50x10mm thick M.S. flat, cut & welded as shown, to form intermediate vertical stanchions. To be welded in position on top of fixing lug. All weld joints to be finished absolutely smooth with grinder. Finish with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect.

Ø8mm, galvanised, M.S. solid round, cut & welded as shown, to form fixing lug - epoxy into brickwork as shown min. 75mm deep to take vertical stanchion welded to it. All weld joints to be finished absolutely smooth with grinder. Finish any exposed steel with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect.

100mm crushed stone

Geoflex acrylic waterproofing system to parapet dressed down over counter flashed Derbigum turnup

fertile soil

One layer Derbigum SP4 waterproofing membrane, with 75mm side laps, sealed by 'torchfusion' to side and top of upstand. Waterproofing to be taken to underside geoflex waterproofing system

position of fullbore outlet

one layer geotextile to protect Derbigum SP4 waterproofing membrane

200mm crushed stone

cement screed laid to fall to outlets,refer to roof plan

25mm ISOBOARD insulation as per Engineer

reinforced concrete roof slab as per Engineer

waterpipe to be built into concrete upstand and connected with downpipe

No ceiling and paint underside reinforced concrete slab, colour white. Refer to finishing schedule for paint specification

tree planter detaill
scale 1:30

detail of I-section and slab connection scale 1:20

grade 300W hot rolled weldable non-structural steel frame to comply with SABS 1431. steel frame must be galvanised to comply with SABS 763 to specified thickness. weldable connections must be made good on site with zinc rich paint while steel is still warm. frame to be primed and painted.

305 x 102 hot rolled steel section to engineers detail

means of advertising by client

plaster and paint - colour by architect

flat twisted wall tie to be installed for every square meter of wall surface area. mild steel wall ties are to be galvanised

open perpend weep holw @ 900 centres

Derbigum SP4 sealed to primed mortar filling and taken underneath parallel flanged channel

two 50 x 50 x 3 steel angles fixed to I-section with 10mm bolts, functioning as horisontal bracing and mechanism for advertising and screening devices

300 x 100 parallel flanged channel fixed to 305 IPE section with bolts to cast-in threaded rod

20mm thick compressible bitumen impregnated sofboard

10mm cast-in threaded rod

reinforced concrete slab to engineers detail

architectural wire mesh used as screen

skerting detail

masonary internal leaf

cement sand filling

Plaster and paint , plaster to be fininshed of flush with edge of alumnium trim

Aluminium straight edge M.Trim 15mm, fixed as per manufacturers specifications

3mm black silicon joint where tile skirting meets alumnium trim

100mm midnight black honed slate skirting on 6mm GOLDSTAR tile adhesive and 6mm dove grey TAL wall and floor grout

SLATE TILE

600 x 600 midnight black honed slate tiling on 6mm GOLDSTAR tile adhesive and 6mm dove grey TAL wall and floor grout and black silicon joints where indicated

30mm cement screed on reinforced concrete slab

TYPICAL SKERTING DETAIL
scale 1:10

sectional perspective of skylight and upstand detaill
scale 1:30

50x10mm thick M.S. flat, cut & welded as shown, to form intermediate vertical stanchions. To be welded in position on top of fixing lug. All weld joints to be finished absolutely smooth with grinder. Finish with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect.

50x8mm thick M.S. flat, cut & welded as shown, to form balustrades. All weld joints to be finished absolutely smooth with grinder. Finish with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect.

plaster to top of wall to slope towards roof to allow water run off

counter flashing

Ø8mm, galvanised, M.S. solid round, cut & welded as shown, to form fixing lug + epoxy into brickwork as shown min. 75mm deep to take vertical stanchion welded to it. All weld joints to be finished absolutely smooth with grinder. Finish any exposed steel with Plascon VELVAGLO SATIN applied strictly as per manufacturer's specification for new exterior mild steel. Colour by Architect

Geoflex acrylic waterproofing system to parapet dressed down over counter flashed Derbigum turnup

Glazing Vision Flush glaze Series 501 fixed skylight with single glazed 8,76mm thick clear laminated PVB safety glass with extruded aluminium cill profile frame in black polyester powder coated aluminium including fleshing and counter-flashing , all in accordance with manufacturer's instructions and left perfectly watertight on completion

opening in slab for roof light

75 concrete slabs to span between opening

angle to support roof light, detail as per engineer

refer to manufacturers details

concrete upturn by engineers design

detail of I-section and concrete wall connection
scale 1:20

330 reinforced off-shutter concrete wall. using purpose made steel formwork with construction/day joints at every 2500 mm, the concrete to be worked to smooth finish to comply with SABS 0155. construction joints to be sealed after curing

grade 300W hot rolled weldable non-structural steel frame to comply with SABS 1431. steel frame must be galvanised to comply with SABS 763 to specified thickness. weldable connections must be made good on site with zinc rich paint while steel is still warm. frame to be primed and painted

two 50 x 50 x 3 steel angles fixed to I-section with 10mm bolts, functioning as horisontal bracing and mechanism for advertising and screening devices

305 x 102 hot rolled steel section to engineers detail

25 steel end plate to detail, welded to rectangular tubing and bolted to I-section

100 x 50 x 25 rectangular tubing welded to end plate and fixed againts I-section and concrete slab

25 steel end plate fixed to concrete slab with bolts to cast-in threaded rod

10mm cast-in threaded rod

cast iron rainwater outlet positioned against chamfered corner, head and outlet threaded to take an 80 dia. mild steel galvanised pipe. outlet to be covered with domical removable grating, secured by a single centre hook bolt.

galvanised pipe to connect with steel waterspout at base of concrete wall where rainwater from balcony connects to the storm water system

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Nexus berber point ultra carpet with acrytac adhesive

CARPET   SLATE TILE

Aluminium straight edge M.Trim 17mm depth between two tiles, fixed as per manufacturers specifications

600 x 600 midnight black honed slate tiling on 6mm GOLDSTAR tile adhesive and 6mm dove grey TAL wall and floor grout with black silicon joints where indicated

50mm cement screed on reinforced concrete slab

TYPICAL THRESHOLD SLATE TILE AND CARPET

PAVELITE to match the colour of the power floated floor

Cement screed to be feathered back with PAVELITE 3m from edge to accommodate level change

CEMENT SCREED   SLATE TILE

Aluminium straight edge M.Trim 17mm depth between two tiles, fixed as per manufacturers specifications

600 x 600 midnight black honed slate tiling on 6mm GOLDSTAR tile adhesive and 6mm dove grey TAL wall and floor grout with black silicon joints where indicated

50mm cement screed on reinforced concrete slab

TYPICAL THRESHOLD CEMENT SCREED AND SLATE TILE

handrail detail

CAFETERIA DINING

CAFETERIA PATIO

25x10mm thick flat bar support bracket
epoxy fixed into wall, fixing by engineer

75x38mm M.S. rectangular tubing, cut & welded
as shown, to form handrail to balustrade

Floor tiles laid on 30mm cement screed

NOTE: treads 365mm
Risers:170mm

reinforced concrete stair as per engineer

365   365

170

170

concrete step and deck connection
scale 1:20

Hillaldam Coburn Systems foldaside 235
sliding door hardware

line of wall behind - see plan

threshold detail

architectural wire mesh used as screen

16 x 100 timber floor boards on 25 x 225
timber joists

timber beam fixed to concrete slab
extension

concrete slab extension to accommodate
for door mechanism

ventilation

section scale 1 : 10

100
25 75
90

75x38mm M.S. rectangular tubing, cut & welded as shown, to form handrail to balustrade

40
50

25x10mm thick flat bar support bracket epoxy fixed into wall, fixing by engineer

90

ø10mm rod securely welded to flat bar and epoxy fixed to wall as per Engineer

axonometric scale 1 : 10

Hillaldam Coburn Systems foldaside 235 sliding door hardware

Black silicon joint where boards meet aluminium track

Semi flexible vinyl floor tiles 300 x 300 x 2.0mm thick

16 x 100 timber floor boards on 25 x 225 timber joists

30mm cement screed on reinforced concrete slab

FLOOR TILES   TIMBER FLOOR BOARDS

Aluminium sliding track fixed between cement screed and timber boards as per manufacterers specifications

timber beam fixed to concrete slab extension

TYPICAL THRESHOLD VINYL FLOOR TILES AND TIMBER FLOOR BOARDS
scale 1:10

I-section to engineer's specifications

SMARTGLASS laminated safety glass balustrade
to manufacturers specification

Euphorbia bupleurifolia

Aloe framessii

plaster and top of concrete edge to slope
towards balcony to allow water run off

Geoflex acrylic waterproofing system to parapet
dressed down over counter flashed Derbigum turnup

chamfered corner

rainwater catchpit with fall towards downpipe - see
plan for position

Derbigum SP4 sealed to primed screed and
turned up over cove/fillet at uprights
cement screed laid to fall

25mm ISOBOARD insulation as per
engineer

reinforced concrete roof as per engineer

fertile soil

one layer geotextile to protect Derbigum
SP4 waterproofing membrane

200mm crushed stone

Ø 50mm waterspout cast into concrete
upstand

6,4mm rhinoboard ceiling, skimmed and painted,
installed as per suppliers specification
ceiling height = 2380mm from uffl.

precast concrete lintol

200

balcony edge planter detaill
scale 1:20