



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

a cultural hub in Pretoria

City_Skin



A N D R E A S M O O K



Submitted as part of the requirements for the MArch (Prof) in the Faculty of Engineering,
the Built Environment and Information Technology.

University of Pretoria
Department of Architecture
November 2007

Mentor: Gary White



.....O U T L I N E

Within the contemporary urban renaissance, culture and visual arts act as catalysts for change. Art and culture-led approaches, working across disciplines, provide wide social and economic benefits that affect people, places and communities.

The proposed design will develop a synthesis between the arts, culture, economy and urban vitality by creating a platform for artists. The goal of the project is to connect Pretoria's multicultural richness and strengthen the network of creativity and cultural regeneration.



tshwane

23

THE SITE

program

fragile

FLEXIBLE

101

event

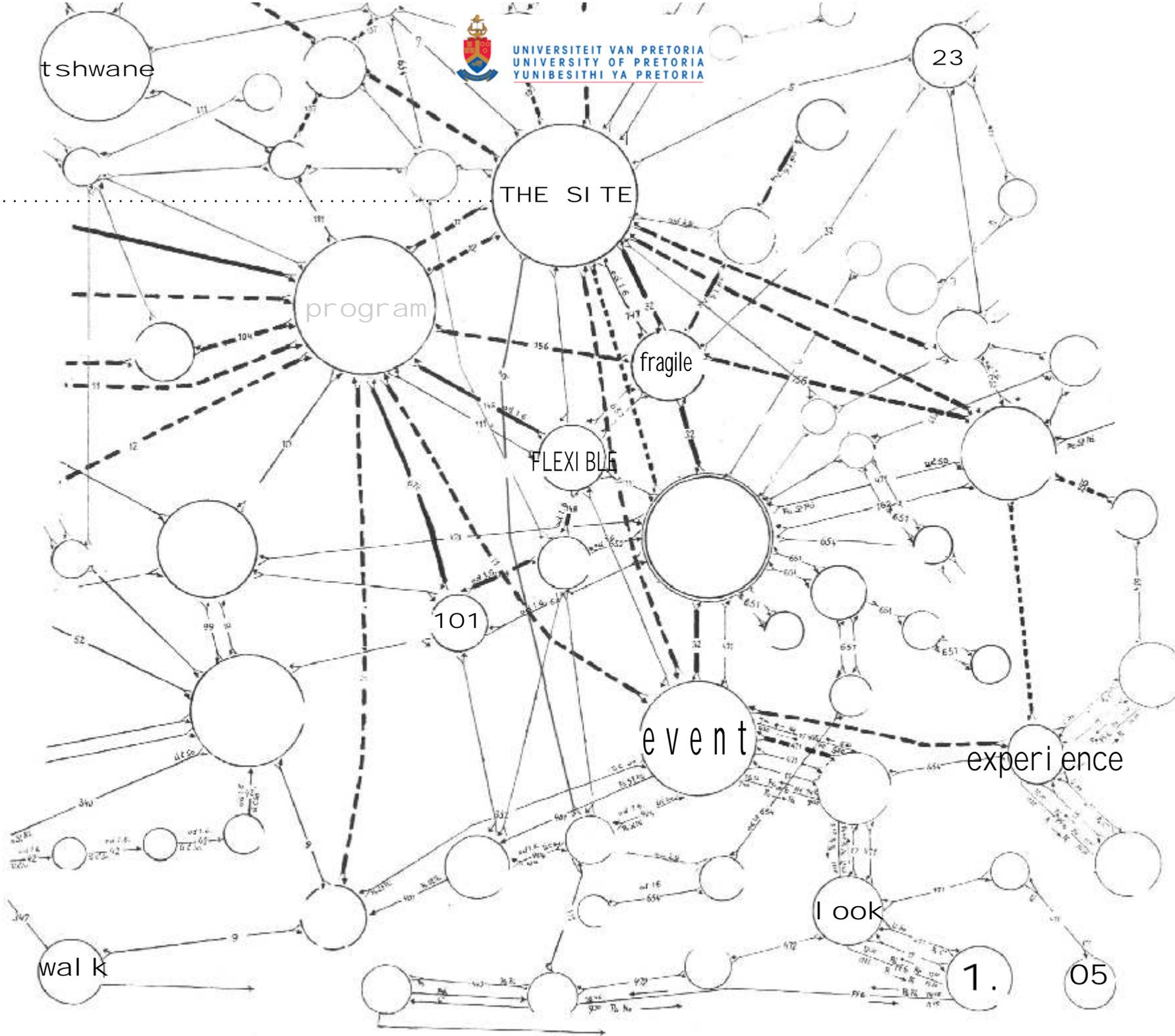
experience

look

walk

1.

05



2.

1.

1. Brief

- 1. 1_Introduction [02]
- 1. 2_Problem statement [04]
- 1. 3_The program [06]
- 1. 4_The user [10]
- 1. 4_The client [12]
- 1. 5_Site requirements [14]

2. Context

- 2. 1 _Physical context [02]
- 2. 2 _Legal context [44]
- 2. 3 _Metaphysical context [46]

3. Design development

- 3. 1 _Fragile architecture [04]
- 3. 2 _Event generators [11]
- 3. 3 _Flexible architecture [24]

4. The design

5. Technical development

6. Conclusion

7. Drawings

Appendices

3. Bibliography

4.



..... B R I E F

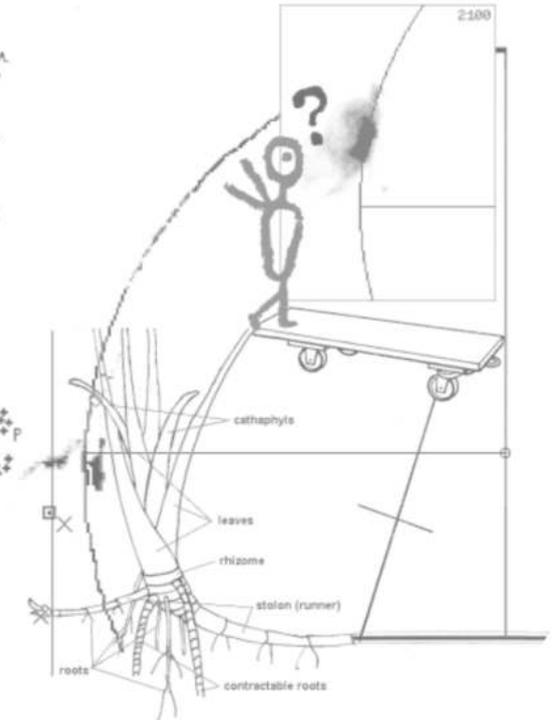
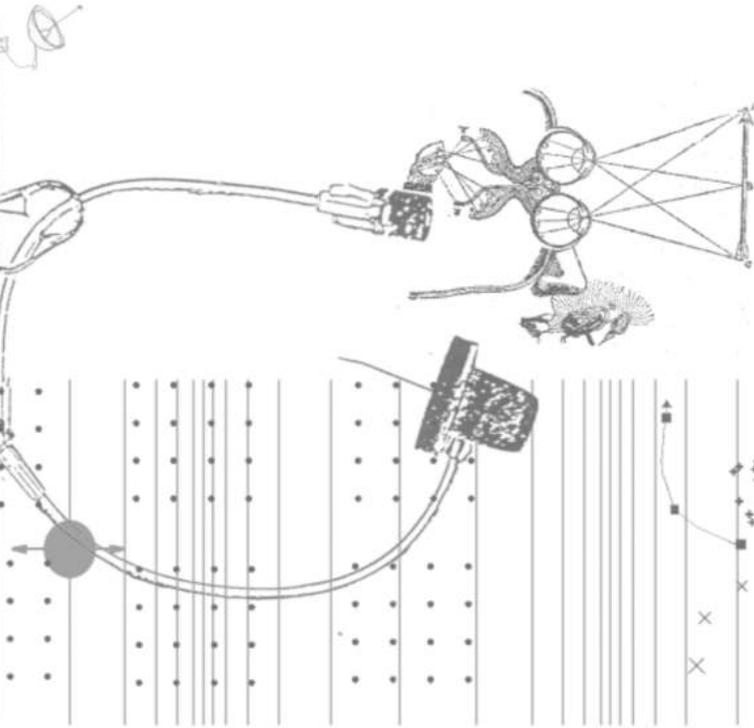
1. 1	I N T R O D U C T I O N	[02]
1. 2	P R O B L E M S T A T E M E N T	[04]
1. 3	T H E P R O G R A M	[06]
1. 4	T H E U S E R	[10]
1. 4	T H E C L I E N T	[12]
1. 5	S I T E R E Q U I R E M E N T S	[14]

chapter 01



We all carry deep-seated cultural baggage, which affects our mindset, thinking, scale of values and the way we structure our worlds. Architecture, as part of the urban text, represents our worldviews, beliefs, values and assumptions, and thus influences how we interact with our surroundings.

EXPERIENCE





1. 1_ INTRODUCTION

Culture is what makes a place and its people distinctive and unique, and how that place is etched into people's minds and imaginations. "Culture accounts for the symbolic forms via which people codify, understand and negotiate their everyday lived experience" (Van Eeden & du Preez 2005: 224).

Essentially, it is about the values and experience of a place, and the range of stimuli that the urban fabric provides on different layers and levels of activity.

The way that societies in the past planned for public culture and amenities offers us some insight into the paradigms of the continuity and change of cities. From ancient Athens, Rome and the Byzantine Empire, to the European Renaissance and today, the arts have always played an important role in creating a vibrant civic culture.

But the traditional role of cultural buildings is changing. Monuments and museums were once seen as important objects. Today, however, they are places that host a much wider range of activities. They are perceived as places for entertainment, interaction and the event.

The current rate of development of cultural facilities, especially in post-industrial cities, parallels the urban renaissance in Europe between the fifteenth and seventeenth centuries. They play an important role in the regeneration of both western and non-western cities. They are closely linked with tourism and the economic growth of cities. "No one can say for certain if it's the 'cultural embedded in the economic' or vice versa, but what is clear is that culture and economic growth in cities are closely linked" (Evans 2001: 135).

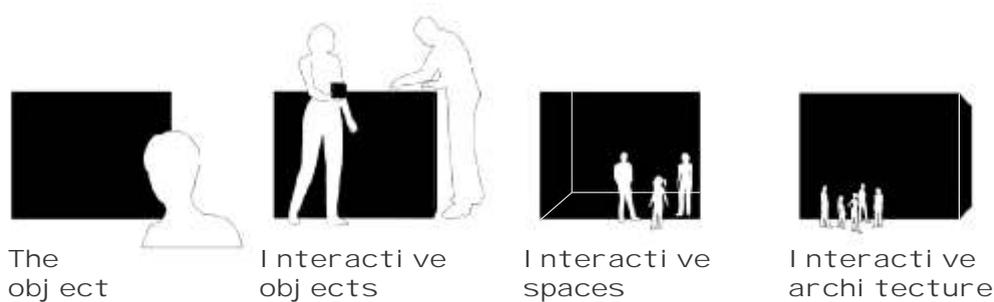
"However, the new 'Grand Projects' and cultural resources are highly concentrated, at the cost of both local amenities and a culturally diverse society" (Evans 2001: preword). Size and image increasingly matter in most new high profile cultural projects. As Graeme Evans, former Director of the London Association of Arts Centres mentions: "Bilbao babies are born everywhere" (Evans 2001: 217).

"Bilbao looks great now, but in 30 years will it prove less flexible?" (Evans 2001: 248).



1. 2_PROBLEM STATEMENT

A mixture of cultures and worldviews can be found in African cities, which are constantly being created, contested, negotiated and recreated. Today, architecture needs to respond to these ever changing conditions. We need to design environments that cover place, space, time and interaction.



In our technologically driven societies the computer is increasingly being viewed as a new medium of representation that is interactive, multi-dimensional, connective and generative. Until recently buildings were viewed as free-standing art objects in the landscape, or as 'decorated sheds'. But with the introduction of digital technologies in our environment this new medium calls for a new form of interactive architecture.

The building envelope is traditionally seen as a static and two-dimensional element in the building's composition.

But a façade is not a mask behind which the building hides; it is the mediated surface between the building and the city. It is the face that communicates the building's functions to us, that activates the public spaces within our cities and that represents the way we view the world.

Architecture must function as an extended form of skin. An adaptable envelope that communicates with us and remains flexible throughout its lifecycle.

fig 1.3 (above) The four modes of representation.



This project did not start with an image or form, or even a formal strategy. This project started from the urban context and the program; the object and the ground. Hidden potentialities were uncovered and a concept, which is closely related to the site and the program, was identified. Eventually a form was developed through the process, which reinforced the qualities of the concept.

But, design “cannot be too 'innocent'”. Although not the starting point for a project, the project was informed by theoretical issues and made connections with important ideas of our time.

“Architecture is seen as the materialization of concepts, as opposed to the materialization of form” (Tschumi 2000:11)

_Adapted from Tschumi in Event Cities 2 (2000: 11)



1. 3_THE PROGRAM

In order to reinforce Tshwane's new post-apartheid identity there is a need for fewer high-profile, monumental cultural projects. These buildings should not be idealized monuments or icons but **street-sensitive, accessible buildings** that reflect their dynamic urban settings.

"Cultural facilities and activities are significant factors in generating inspiration, self-confidence, debate or ideas exchange as well as the creation of a city's image ... Consuming high-profile arts and cultural activities has less strong transformative effects on individuals than direct participation, whose impact is greater in terms of human development and tapping creative potential" (Landry 2000: 123).

Cultural quarters consist of creative clusters. They are dependent on informal networks, as well as face-to-face contact. They require flexible and accessible environments. Creative industries businesses that operate within these environments mediate between multiple areas; between the

formal and informal; the lifestyle-orientated and profit-driven; the local and non-local; the public and private.

The task of the creative intermediary is to make sense of these processes, identify opportunities and offer support, and encourage the different players. The creative intermediary operates as a gatekeeper, initiator, supporter, mediator and source of information.

Creative intermediary organizations are mainly public-sector funded. They need to mediate between the top-down sector and the bottom-up environment.

The **proposed design** will play the role of a creative intermediary. Its aim is to develop a synthesis between the arts, culture, economy and urban vitality by creating a platform for artists, as well as providing resources and facilities for training, recruitment, financial support and promotion. It will provide spaces for presentations, exhibitions, informal gatherings, internships and residencies for contemporary artists.



The following is to be accommodated in the centre:

- _large gatherings and performances
- _workshops
- _gallery (artist run and commercial)
- _archives and computer workroom
- _screening room
- _studio space
- _facilities for informal traders
- _café and restaurants
- _offices
- _rentable office space for industry professionals
- _student housing
- _tram stop and ticket sale booth
- _public amenities

It is a mixed-use building in which 24 hour activities are promoted.

- public 
- semi-public 
- private 
- services 

morn i ng

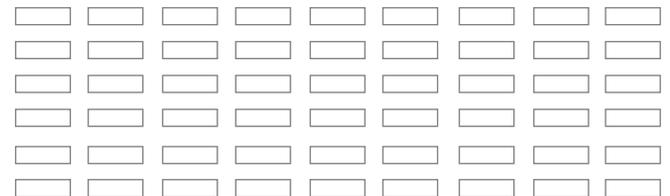
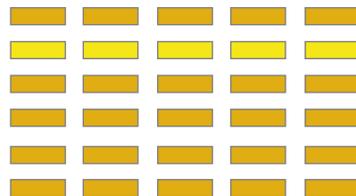
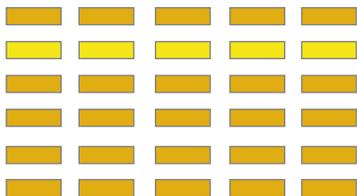
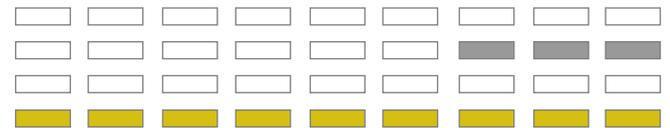
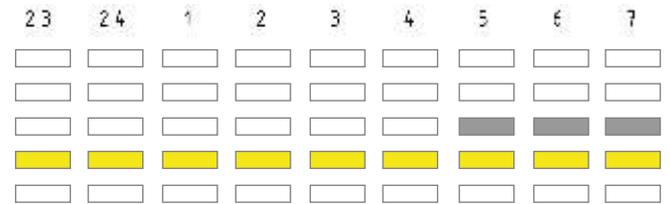
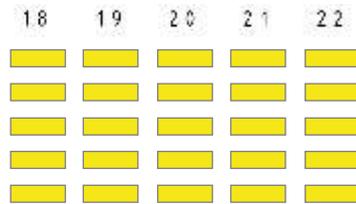
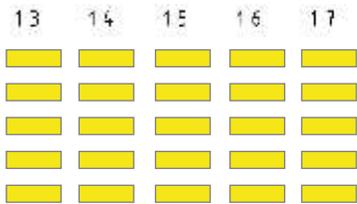
	8	9	10	11	12
main foyer					
digital gallery					
cafe					
public restrooms					
tram stop					
basement parking					
private entrance					
restaurants & fast-food outlets					
offices					
residential					
semi-private entrance					
workshop area					
multi-media room					
archives					
conference rooms					
studio space					



afternoon

eveni ng

ni ght







1. 4 _THE USER

To describe the user the French term *animation socio-culturel* is applicable. The term is used widely to describe the work of a community artist who uses the **material of everyday life**.

The *animateur's* role is central. It is the community artist that animates and gives life to a community. They help celebrate and give a voice to the local cultures that shape and bind a community, by living and working in the mainstream of the community life. The *animateur* acts as a catalyst and an organizer of work. He or she imparts with their skills, channeling their creative energy to the community.

The *animateur* can be anyone. It is the person who takes an active role in building the dynamic culture. People are no longer consigned to only consume art, professional opinions and aspirations. The *animateur* is not admired from a distance, but is someone who finds expression and meaning in working with others. The product is the animation of an ongoing art event; part of everyday community life with the city forming the stage.

fig 1. 4 Collage: the *animateur*.





1.5 THE CLIENT

The Department of Arts and Culture [DAC] is tasked to create an environment conducive to the growth, development and flowering of South Africa's arts, culture and heritage landscape. Among its key objectives are the improvement, re-orientation and expansion of the arts and culture sector to serve South Africa's cultural needs.

Procurement: The Department of Arts and Culture, The Royal Netherlands Embassy; Nedbank; Sun International and The Vodacom Foundation are the Founding Trustees of the Arts and Culture Trust (ACT). It functions as a partnership between the private sector, the government and the local community.

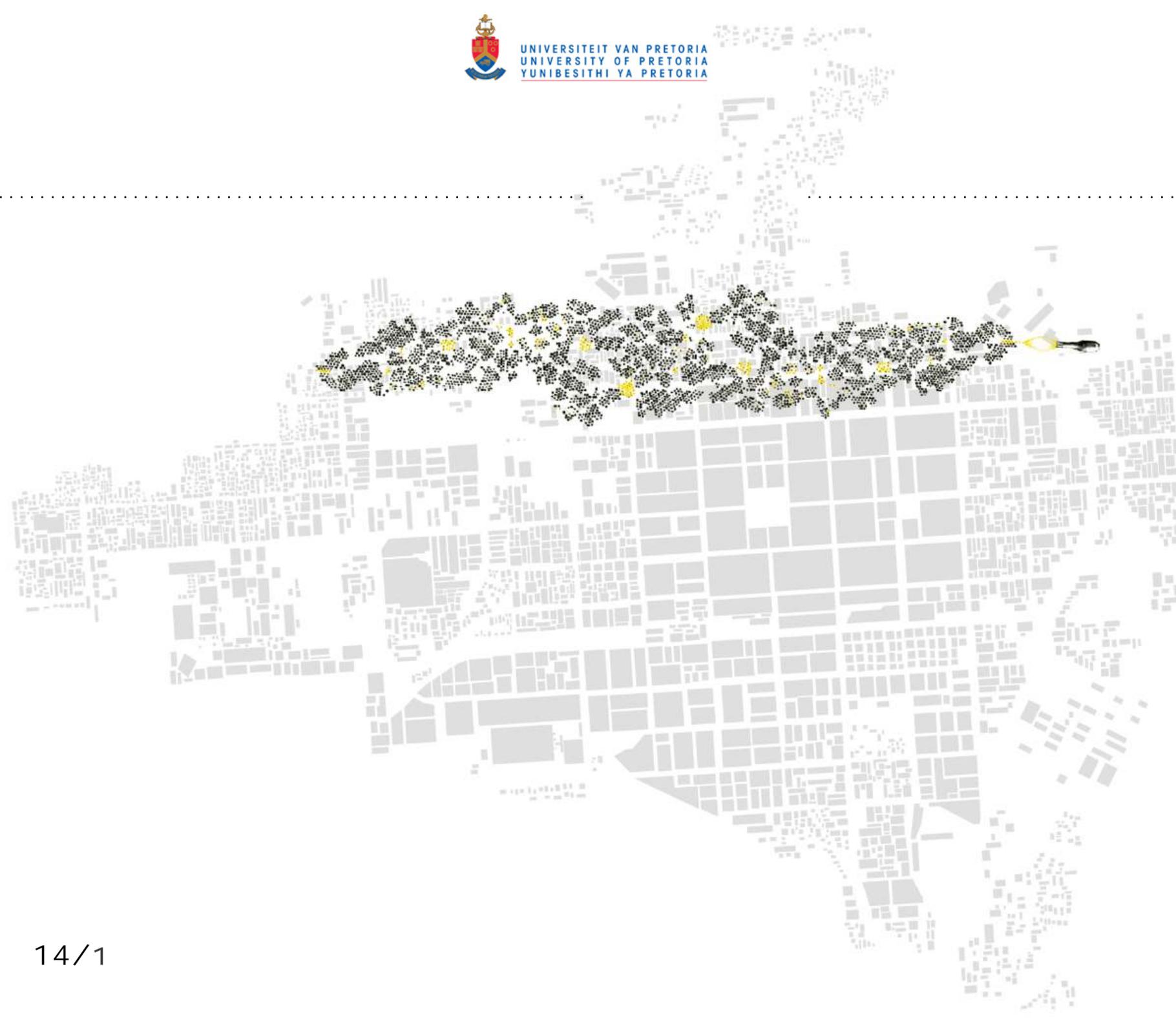
The ACT was endorsed by former President Nelson Mandela. It is the oldest body that was established to fund arts and culture in democratic South Africa. It has supported over 500 projects with funding to the total value of R11 million since 1996.

The Arts & Culture Trust funds projects across the spectrum in arts, culture and heritage. The trust focuses on areas of development which include job creation, creative skills, management skills, cultural diversity and cultural tourism marketing. Projects that are currently funded are in the fields of theatre, music, dance, literature, heritage, arts administration, community arts, visual arts, arts education and multi-disciplinary projects.

Management: the project is to be managed by a board of representatives.



fig 1.5 Department of Arts and Culture.





1.6 SITE REQUIREMENTS

The physical location of the project is extremely important because it has to act as a catalyst for further change in the northern part of Pretoria's CBD, which is in dire need of regeneration. The site forms part of the larger urban framework for Pretoria and is to become **the cultural hub of Pretoria.**

The site was identified according to the following criteria:

- The site must be located in an area in need of urban regeneration
- In order to convey the image of the city as a culturally perceptive city to its urban population and visitors, the site must be located at a visual node, i.e. gateway into the Pretoria CBD.
- The site must be in close proximity to large public transportation nodes in order to give the site easy public access and connect it to the larger urban network.
- It is important that this project must form part of the established art infrastructure in the city, i.e. a network. This project has to act as a translator between the language of the formal world of arts granting and administration, and the community of practitioners.



This project forms part of a group framework, compiled by the study group of 2007. Throughout the study year we had the opportunity to work in conjunction with other students. Our designs affected and responded to each other, strengthening the design in this way.

This project shares the site with M. Jooste; who designed the MTV Production Studios in '*Can you see the music?*' and R. Osman; who designed the '*Digital Awareness Centre*'. Together these will form the new cultural hub of Pretoria.



C O N T E X T.....

02

chapter

2. 1	PHYSI CAL CONTEXT	[02]
2. 2	LEGAL CONTEXT	[44]
2. 3	METAPHYSI CAL CONTEXT	[46]



fig 2.1 Ci ti es wi th popul ati ons over 1 mi lli on.

2. 1_PHYSICAL CONTEXT

The 21st century is the century of the city (Landry 2000: *xiii*). Cities have always been the crucible of culture and civilization. Cities are the most productive centres in a national economy. They are the places where local and global cultures meet and people are drawn to for work, politics, pleasure, crime and conquest.

But today cities, especially African cities, face enormous challenges. They are required to compete in an increasingly global world, and their challenges are compounded by infrastructural, economic and social problems. Rapid urbanisation, ongoing migration and increasing informality are complex issues that lead to dramatic changes of the urban fabric.

“Cities are the places where Africans have been most intensely engaged in the conflicts precipitated by their own conflicts, their political and economic practices and their heterogeneous, often contradictory, representation of outside worlds” (Simone 2005: 2).

Tshwane has the potential to be the African Capital city, but it is a fragmented city. Since the fall of Apartheid and the country’s first democratic election in 1994 the city has been experiencing radical changes. These changes are visible in the urban sprawl, social fragmentation and levels of crime, violence and poverty.

If the city is to function and flourish, if Tshwane is to become a hub of the African renaissance, there has to be a paradigm shift in the way the city is perceived.

"The urban site is not a stable place, but instead a transitory and multivalent space – an aggregation of ever shifting scales, programs, and actors, all set within a temporal framework that holds both prior traces and future modifications" (Kahn 1995:199).

Urban sites are in a constant state of flux. They exist within visible and invisible conditions and in a continually shifting territory. This is especially true for African cities, where change is a daily occurrence. E. Pieterse affirms that: "South African cities are being remade and reimagined at a ferocious pace" (Pieterse 2005: 139). In the face of ever-changing conditions, the question arises as to how one can give an accurate and coherent representation of the urban site.

Conventional analysis methods usually objectify the urban site. They are analytic representations of information that usually portray ideal, ordered urban visions (Kahn 1995:199). This is in contrast to the dynamic reality of cities.

Urban sites exist on different scales: global, metropolitan, regional and local; distant and close; permanent and impermanent. Each scale brings a new perspective of the urban elements and aspects to light. It is a process of searching urban values embedded in the urban site. Drawn together, these layers expose, maybe not a total, but a predilection of the city's vibrant character.

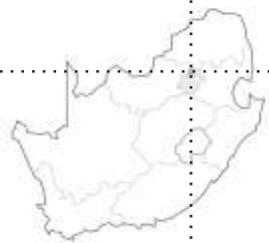
"All cities are places of **multiple intensities and layers**. The intersection of intensities is not that of fixed objects and identities with clear boundaries. Rather, it is an intersection that 'frees' pieces of objects and identities from specific constructive enclosures to new layers and formations" (Simone 2005: 9).



tshwane_MACRO SCALE
pretoria & study area_MESO SCALE
site_MICRO SCALE



Global position: 25° 44' S.....28° 11' E



Johannesburg Ekurhuleni

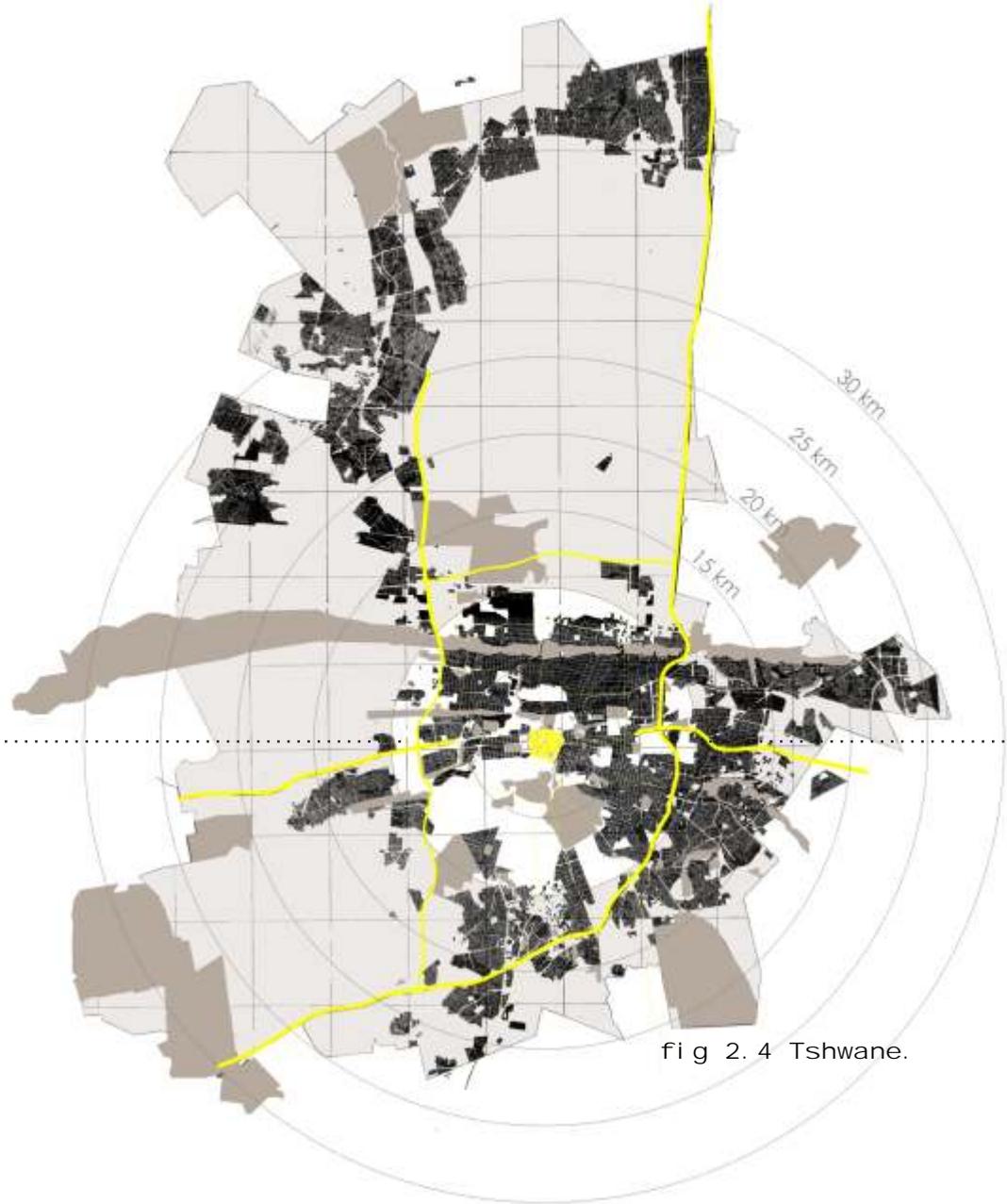


fig 2. 2 South Africa.

fig 2. 3 Gauteng.

fig 2. 4 Tshwane.



MACRO SCALE: tshwane



Tshwane is the northernmost influential city of South Africa. It is situated on two major arteries. Connecting the east and west coasts, the Platinum Corridor intersects the north-south route that links Africa over Tshwane with Cape Town.

Tshwane extends over the borders of Gauteng and the North West Province. Tshwane, together with Johannesburg and Ekurhuleni, form part of the Gauteng Conurbation, which is the most urbanised and economically powerful area of South Africa as well as Africa (City of Tshwane 2007: 10).

The cities within Tshwane still bear the signs of the spatial legacy of Apartheid. Tshwane is left with a spatial duality characterised by strong cores surrounded by a number of satellite nodes that spread over a vast area. The city of Tshwane thus functions as a multi-nodal city, of which Pretoria is regarded as the core city.

Currently only 40% of the population live in the central urban areas, which contribute up to 91% of the economic output. With the majority of the city users living in peripheral areas there is a near-total dependence on public and private transport for survival (Appleyard 1983: 111). This results in high volumes of traffic from suburbs on a daily basis and a city form characterized by isolation, alienation and segregation.

MACRO SCALE
MESO SCALE
MICRO SCALE



fig 2.5 Tshwane noll i map.

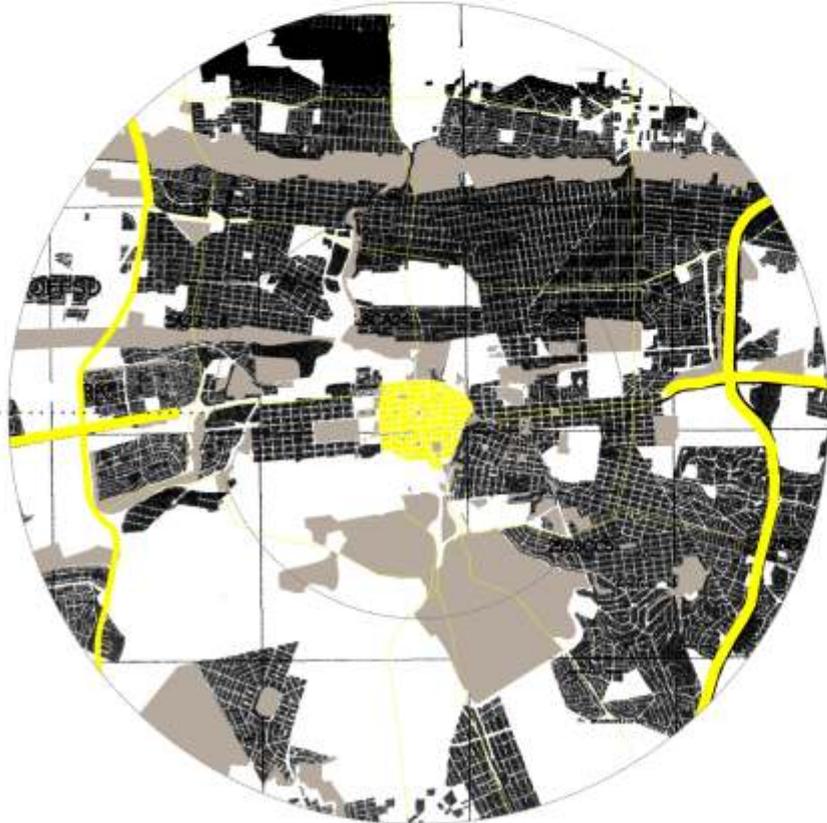


fig 2.6 Pretoria at the heart of Tshwane.

MACRO SCALE
MESO SCALE
MICRO SCALE



MESO SCALE: pretoria & study area

Pretoria lies at the heart of Tshwane. It is characterised and symbolised by its natural features and unique heritage. It is the administrative capital of Tshwane containing the businesses, services and markets that support its peripheral areas.

Pretoria was once a multi-faceted city core, but it has changed to an area accommodating an unrelated mix of urban activities (Pretoria Inner City ISDF 1999: 2). There are now clear signs of urban decline in the city with a lack of growth and development.

Some critical issues that Pretoria faces and that must be addressed are:

- The shortage of usable **open space**. Most open spaces are inaccessible and mono-functional.
- Parks and green spaces are scattered and function in isolation.
- The lack of **public facilities** and amenities.
- The **image** of Pretoria as a capital city lacks articulation.
- Elements within the city are **fragmented** with no coherent linkages.
- As in most post-industrial cities, there is a lack of balance between pedestrian movement and public and private **transport**. Streets, as movement channels for cars and taxis, dominate the urban form.

The aim is to shift Pretoria's image from a post-apartheid city to a city with a rich mix of history and diverse local cultures. The objective is, therefore, to anchor Pretoria's distinctiveness within Tshwane and to transform it to a 24 hour place to live, work and play.



_the study area:



MACRO SCALE
MESO SCALE
MICRO SCALE

10/2

fig 2.7 Pretoria and study area.



The northern area of the Pretoria inner city is a lively but highly neglected area that is in desperate need of regeneration. Its character stands in contrast to the central business district and the quiet of the ordered southern part. The northern part is characterized by low density mixed land use and large areas of undeveloped council-owned land, which have a negative spill-over effect on adjoining areas.

The northern area is the economic heart of the informal sector of Pretoria. During the day time taxis and taxi ranks dominate the area while formal and informal trade takes place on the sidewalks and in small shops. Any public spaces have been taken over by taxi ranks. Sidewalks, spotted with oil spills and trash, are mostly packed with taxis and parked cars waiting to be washed and fixed. To outsiders that area is perceived as a place of fear, crime, pollution and degradation.

“In impoverished public spaces, most of the social and recreational activities disappear completely, leaving only the remnants of the most utilitarian and necessary pedestrian activities” (Gehl & Gemzoe 2003: 14).

MACRO SCALE
MESO SCALE
MICRO SCALE

fig 2.8 Pretoria and study area.



“The city of tangible surfaces is inseparable from the city of popular culture, anecdote and memory” (Stevenson 2003: 1).

Cities play a pivotal role in the construction and experience of the cultures of everyday life. Within their spaces collective and individual meanings and identities are shaped and reshaped. The representation of cities in the norms and values embedded in urban landscapes, the buildings and monuments, etc. “are pivotal in shaping the ways in which we know and imagine the city” (Stevenson 2003: 110). These representations frame the past and show the prospects for its future renewal. It also makes the city legible to the city user, so that the individual can operate successfully within the city.

“Cities are understood and experienced in a range of contradictory yet reinforcing ways. Fundamental is the interplay between the ‘real’ city of lived personal experience and the ‘imaginary’ city of representation and fantasy. One is a tangible city of surfaces – of footpaths, buildings and roadways. The other is the place of literature, popular culture, anecdote and memory” (Stevenson 2003: 113).

Each individual perceives his environment in a different way on a conscious and unconscious level, and these memories are further shaped according to his or her own frame of reference.

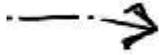
“The city as we imagine it, the soft city of illusion, myth, aspiration, nightmare, is as real, maybe more real, than the hard city one can locate on maps, in statistics, in monographs of urban sociology, and the demography and architecture” (Raban, J. 1974. *Soft City*; in Stevenson 2003: 54).

Only a few of the elements that help shape the city image can be quantified and analyzed. According to Kevin Lynch (Image of the City, 1960) the physical elements that shape the city’s image, which can be analysed , are:

MACRO SCALE
MESO SCALE
MICRO SCALE



_the ci ty and i ts el ements:



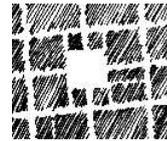
paths



edges



di stri cts



nodes



l andmarks

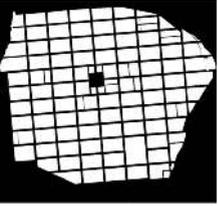


- mai n axes
- pri mary public movement
- secondary public movement
- pri mary pri vate movement
- secondary private movement



PATHS:

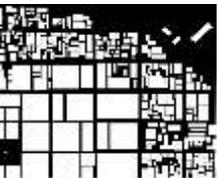
_channels of movement. These form some of the most predominant elements of the city image. The city is observed while moving through it; all other elements develop and are arranged accordingly.



EDGES:



_linear boundaries breaking continuity between phases. They become lateral references for users. They define general areas and are important organizing features.



DI STRI CTS:

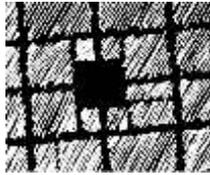
1. North CBD (study area)
2. Central CBD
3. South CBD
4. Marabastad
5. National Zoological gardens
6. Pri nshof
7. Arcadi a
8. Sunnysi de
9. Sal vokop



_two dimensional city sections, medium to large in size. They have an identifying character by which the observer can identify himself as being 'within' the district. Most observers construct their city to this on a personal level.



1. church square
2. strijdom square
3. northern gateway
4. taxi station
5. dr. savage road gateway
6. eastern gateway
7. southern gateway
8. pretoria train station
9. town hall
10. ben schoeman gateway
11. western gateway
12. d.f. malan road gateway
13. belle ombre station



NODES:

_strategic points of focus between which the observer moves and which one can enter. Mainly junctions of path interchanges. Nodes may alternatively gain importance through densification of activities (gathering spaces) or character. (enclosed spaces).



1. church square
2. absa building
3. reserve bank building
4. civitas building
5. zoo
6. lion bridge
7. apies river
8. pretoria train station
9. town hall
10. union buildings
11. meintjieskop
12. salvokop
13. marabastad
14. steenhoven spruit
15. wiatwatersberg



LANDMARKS:

_visual points of orientation on different scales by which the individual can orient themselves in the city. They may have cultural or aesthetic importance, and be natural or man-made. They become points of interest with clear identities.



fig 2.9 Pretoria: city of layers.

MACRO SCALE
MESO SCALE
MICRO SCALE

The two central axes in Pretoria are dominant visual and spatial features, and there is a strong street hierarchy according to the grid system. Natural features shape the city form. On the west and east rivers form the historic city edge, while in the north and south the city grid is contained by parallel ridges.

The site is located in the north eastern quadrant of the city, on the historical edge.

The grid has historically been a common symbol for rational urban life. In Greek colonies, the Roman empire and medieval towns it symbolized the freedom from traditional restraints and the achievement of geometric order.

Many view the grid as a mechanical monotony, but according to P. Groth (1981: 69), it may be “the best possible provision for 'organic' growth in a city's future.” He also states that the grid is “rich in potential clues to the processes of urban building patterns, to the history of urban growth, and to the differences and variety which can aid in the creation of livable and beautiful cities.”



Pretoria is laid out according to the ancient Roman grid system (Pienaar 2007). It is characterized by an orthogonal street layout with two main axes, the *cardo et decumanus*, which form the geographical and spiritual center. Paul Kruger Street, the *cardo*, is orientated North-South. *Cardo* is Latin for the word 'hinge' and traditionally it serves as the center of the economic life. Church Street, the *decumanus*, is orientated east-west.

The *cardo et decumanus* divide the city into four grid squares which have a central radius of 1 km, an easy walking distance of about 10 minutes. Each grid square has its own distinct character and forms its own community. Everything within a specific quarter is connected and acts as a self-sufficient part of the larger system.

As with Church square, at the ceremonial center of the city, public spaces and landmarks are also placed within important intersections of the grid system. Strijdom Square, the Paul Kruger house and the synagogue in Paul Kruger street are just a few examples of landmarks that are located on the invisible grid system that connects the historical city fabric.

The site is also located at one of these intersection points, giving it an important status within the existing city hierarchy.

— the grid:

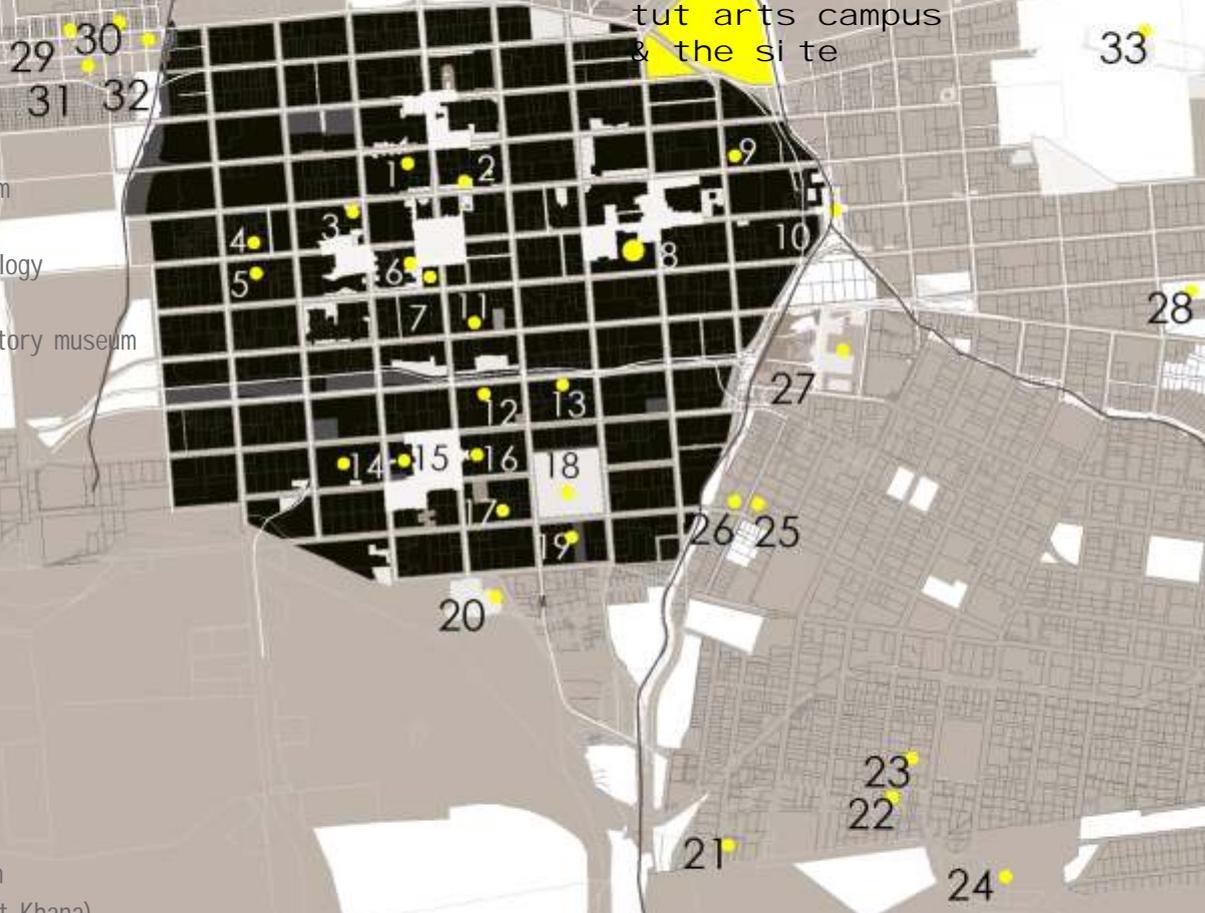
paul kruger street

MACRO SCALE
MESO SCALE
MI CRO SCALE

fig 2. 10 Grid system in Pretoria.



- 1 post office museum
- 2 pierneef museum
- 3 grootkerk
- 4 paul kruger house
- 5 paul kruger church
- 6 capitol theatre
- 7 raadsaal
- 8 state theatre
- 9 mosque
- 10 lion bridge
- 11 claude malan museum
- 12 museum of sciences and technology
- 13 little theatre
- 14 national cultural history museum
- 15 city hall
- 16 transvaal museum
- 17 barton keep
- 18 burgers park
- 19 melrose house
- 20 pretoria station
- 21 unisa art gallery
- 22 kirkness house
- 23 moerdykhuis
- 24 b.j. vorster tower
- 25 mea vota
- 26 breytenbach theatre
- 27 oost-eind
- 28 pretoria art museum
- 29 ismaili mosque (Jammat Khana)
- 30 orient theatre
- 31 nawab mariammen temple
- 32 empire theatre
- 33 union buildings



tut arts campus
& the site

fig 2.11 Cul tural Landmarks i n Pretori a.



the cultural network:

centralized_ dominated by one node to which all others are connected

decentralized_ dominated by a few key nodes; structure of the internet

distributed_ each node is equal to all others

Tshwane should be developed as the Cultural Capital in Africa (Tshwane Inner City Development and Regeneration Strategy 2005: building block 2). This is vital for shaping the identity of Tshwane as the African Capital and to improve tourism.

Existing cultural landmarks are identified and mapped (fig 2.11). These include landmarks, historical buildings, museums, theatres, galleries, tourism nodes, etc.

From this analysis it is clear that there is rich mixture of existing cultural landmarks. But, there is a lack of linkages between most of the landmarks, especially to and from the TUT Arts Campus. Although these landmarks are linked physically they remain fragmented.

But linkages can also be virtual. We have entered a new realm where new connections can be formed in an instant in a network structure (see page 51/2). Linkages between elements are linked on different hierarchy levels (fig. 2. 12).

If Tshwane is to become the Cultural Capital, the cultural landmarks can not function in isolation, but must be linked within a network where they strengthen and support each other. This network must connect the landmarks on a local and on a global scale.

MACRO SCALE
MESO SCALE
MICRO SCALE

fig 2. 12 Cultural network systems.

wi nni ng back publ i c space

"In every age urban spaces – streets and squares – have served to stage spectacles in which the citizenry



A city is made of diverse interactive networks that work on different scales. To define a living city these networks need to connect with each other. "The life of a city is directly dependent upon its matrix of connections" (Salingaros 2003: 2). "The relative number of connections establishes how a living city works" (Salingaros 2003: 7). "Urban life is the interaction made possible when the nodes in a city are connected to each other, either directly or indirectly" (Salingaros 2003: 8). Thus the more connections a city has between nodes, the more functions it can accommodate, resulting in a vibrant multifunctional city life.

A multilayered transportation network in a city is crucial for its survival. Traditional urban forms have been shaped over time by pedestrian networks, but now the car dominates our cities. "Cars give people wonderful freedom and increase their opportunities. But they also destroy the environment, to an extent so drastic that they kill all social life" (Alexander 1977: 64).

fig 2. 13 Pedestrian network in the northern area of Pretoria.

_the pedestrian network:

participated as players and audience. Urban life is nothing if theatrical” (Kostof 1991: 222).

In Pretoria, especially in the northern area, there is an inadequate interface between the car and the pedestrian realms. “A city needs to be connected on all scales” (Salingaros 2003: 12), and the connective hierarchy of the northern area of Pretoria misses its lower scale.

In the central Pretoria area there is a working pedestrian network and arcade system. Our proposal for the regeneration of the study area includes the continuation of this pedestrian network throughout the whole city. In this way each part of the urban fabric catalyzes interactions among other parts.

As Christopher Alexander explains in pattern number 52 in *A Pattern Language* (1977: 274): “Except where traffic densities are very high or very low, lay out pedestrian paths at right angles to roads, not along them, so that the paths gradually begin to form a second network, distinct from the road system, and orthogonal to it. This can be done gradually – even if you put in one path

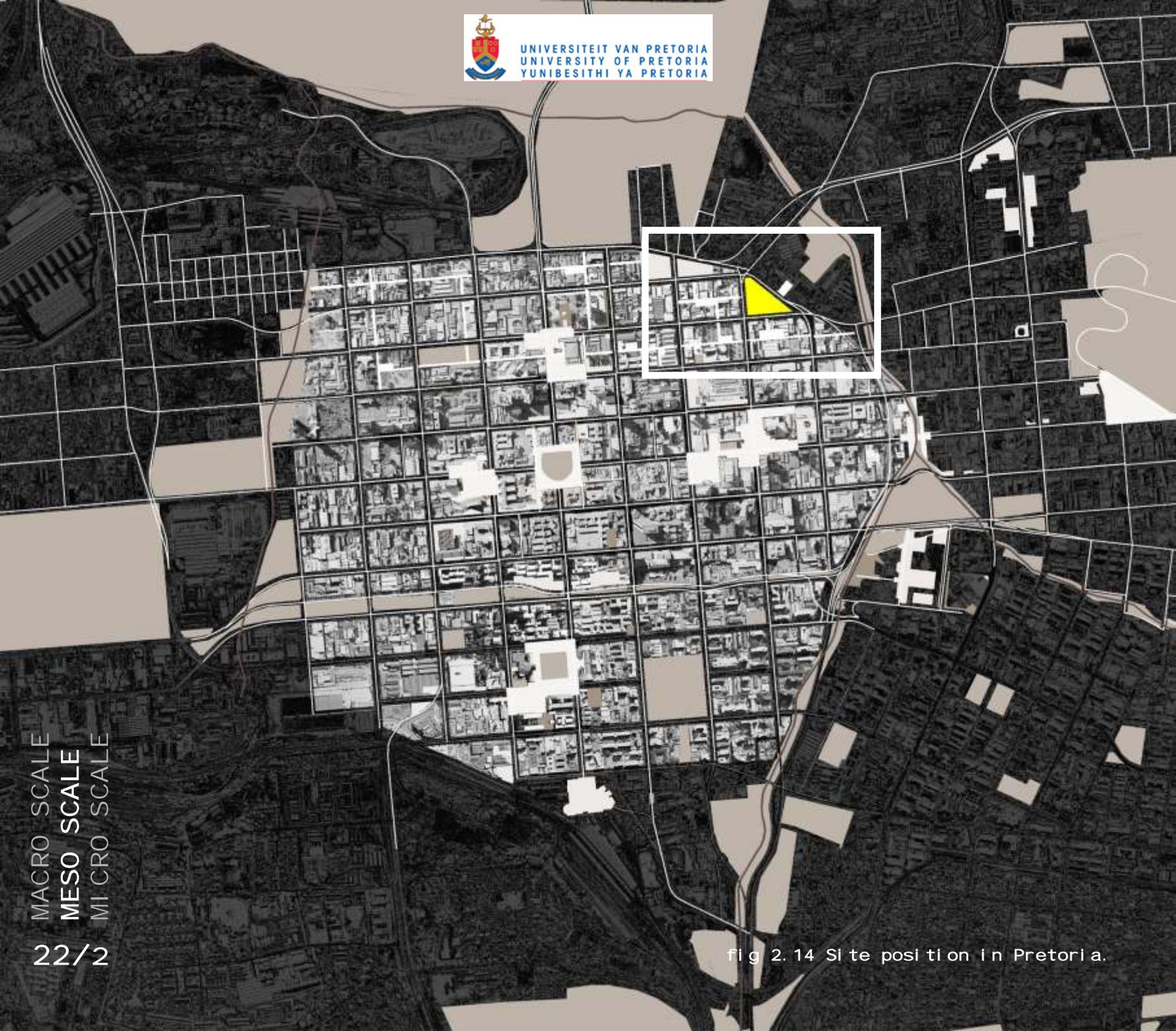
at a time, but always put them in the middle of the 'block', so that they run across the roads.”

The aim is also to provide Pretoria with public spaces offering a wide variety of urban activities and “creating an urban framework as a meeting place for people” (Gehl & Gemzoe 2003: 257), because “people connect most strongly at the most intimate scales” (Salingaros 2003: 14). The focus is to provide pedestrians with attractive walking routes and public spaces to stop and linger along the way. This, in turn, promotes social interaction and recreational activities, and inspires people to enjoy the urban scene.

“City walking is a necessary key to urban quality, vitality and pleasure. The basis and the beginning for everything. *Vadare necesse est* – walking is essential” (Gehl & Gemzoe 2003: 257).



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



MACRO SCALE
MESO SCALE
MICRO SCALE

22/2

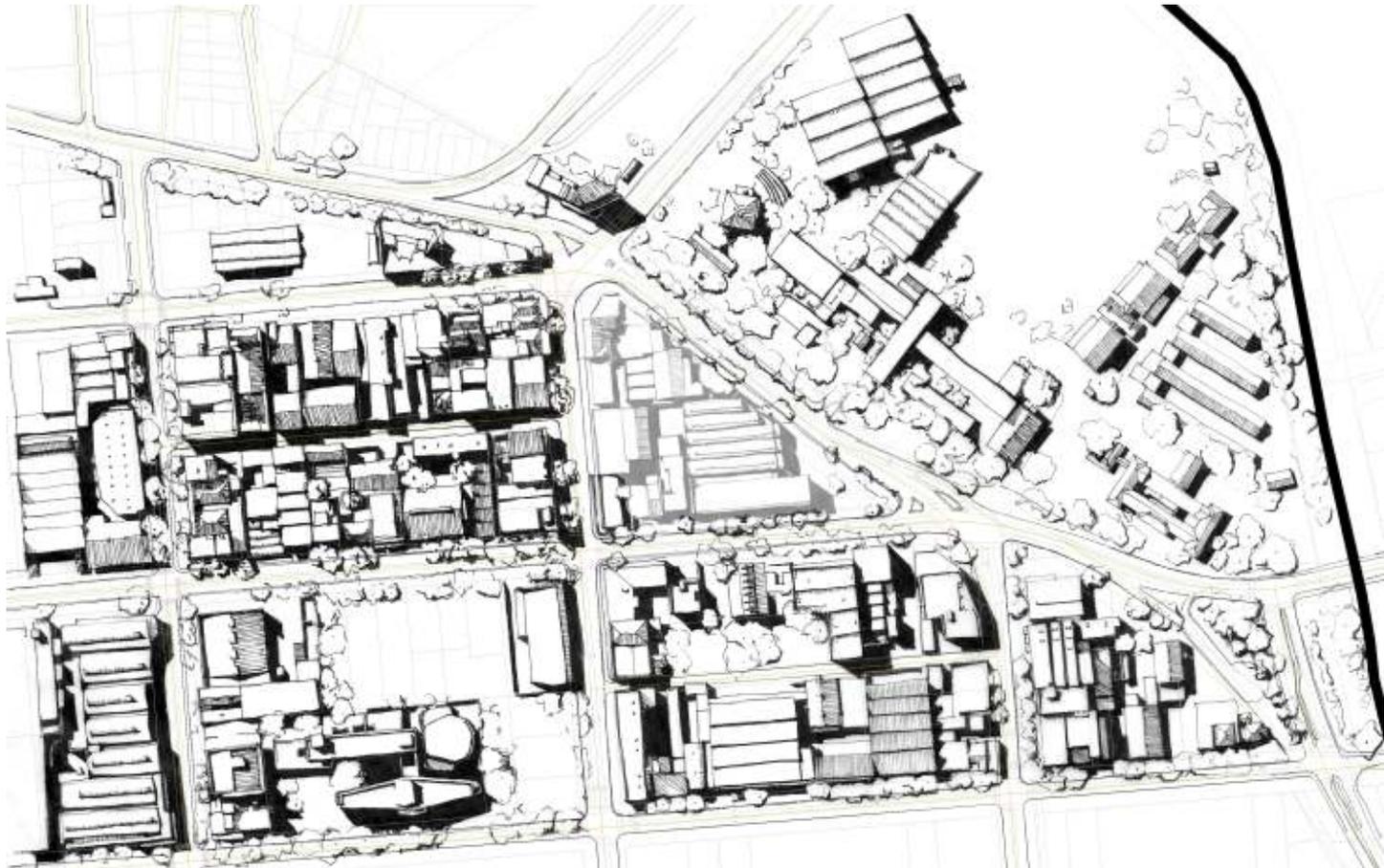
fig 2.14 Site position in Pretoria.



MI CRO SCALE: the si te

Erf 3054, corner of Struben and Du Toit Street, Inner City of Pretoria.

The site is located on the north-eastern edge of the city CBD, opposite the Tshwane University of Technology (TUT) Arts Campus. Its boundaries are formed by Prinsloo Street in the West, Struben Street in the South and Du Toit Street in the East.



MACRO SCALE
MESO SCALE
MI CRO SCALE

fig 2.15 The si te.



_the si te wi thi n pretori a:



ci vi tas
bui l di ng

pre tori a
zoo

bl oed
st reet
ta xi rank

wi twaters-
ber g

dr. sa vage
ta xi rank

SITE

tut arts
campus





reserve bank

tel kom tower

uni sa

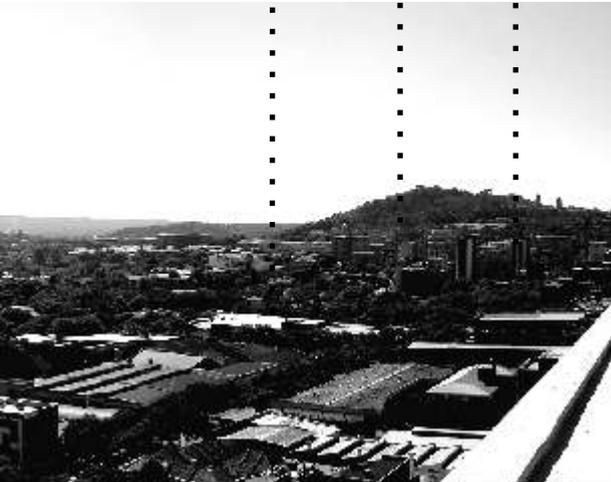
absa tower &
strijdom
square

freedom park

voortrekker
monument

church square

fig 2. 16 Panoramic view of the Pretoria skyline from Munotoria.



nelson
mandela
development
corridor

meintjies
kopp...

unicon
bujldings



SITE

meintjies
kopp...
unicon
bujldings

government
boulevard:
struben
street

mosque

fig 2. 18 Site from Prinsloo Street.

api es ri ver



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

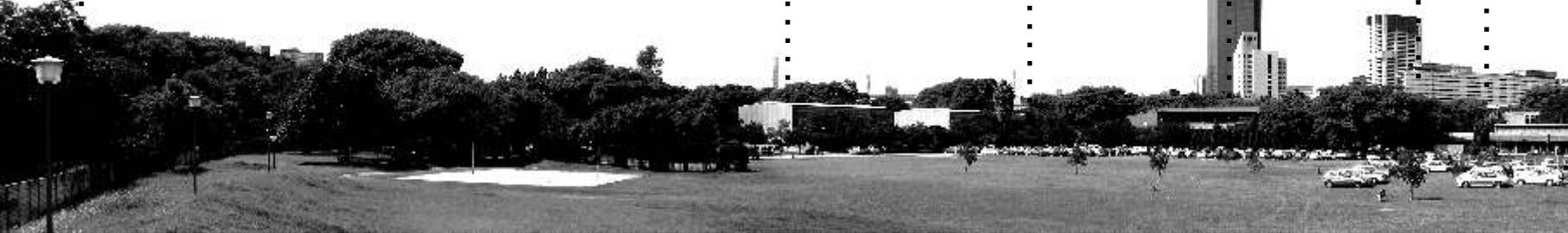
tel kom tow

mosque

reserve bank

ABSA tower &
strijdom
square

munotori a



The physical location of the project is extremely important. The site has to act as a catalyst for further change in the northern part of Pretoria's CBD, which is in dire need of regeneration. The site forms part of the larger urban framework for Pretoria. The aim is that the will become the **cultural hub** of Pretoria.

In order to convey the image of the city as a culturally perceptive city to its urban population and visitors, the site is located at a visually prominent but currently undefined node, the Dr Savage gateway into the Pretoria CBD.



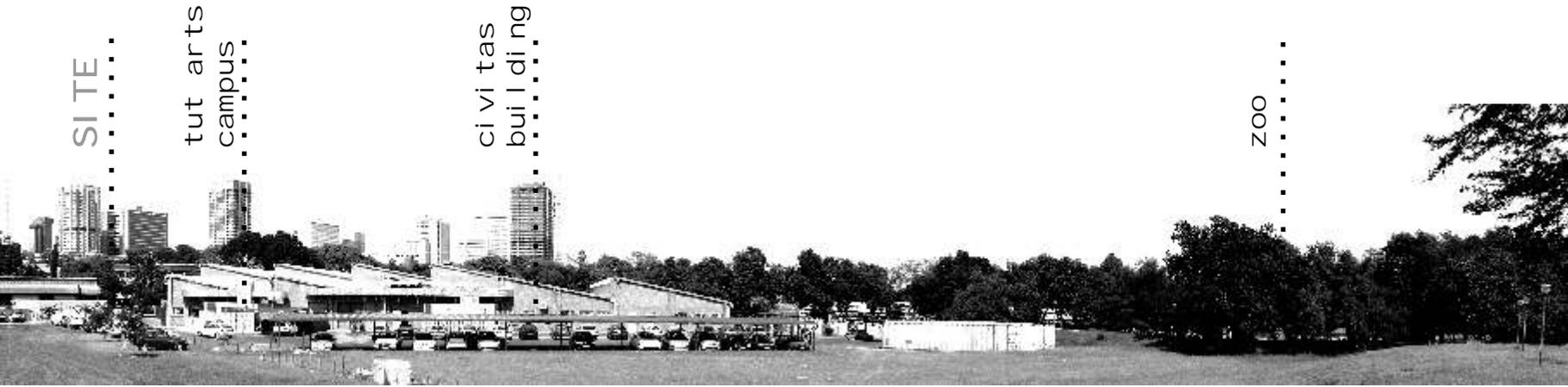


fig 2. 19 Paronami c view of the Pretori a skyl ine from the TUT Arts Campus.

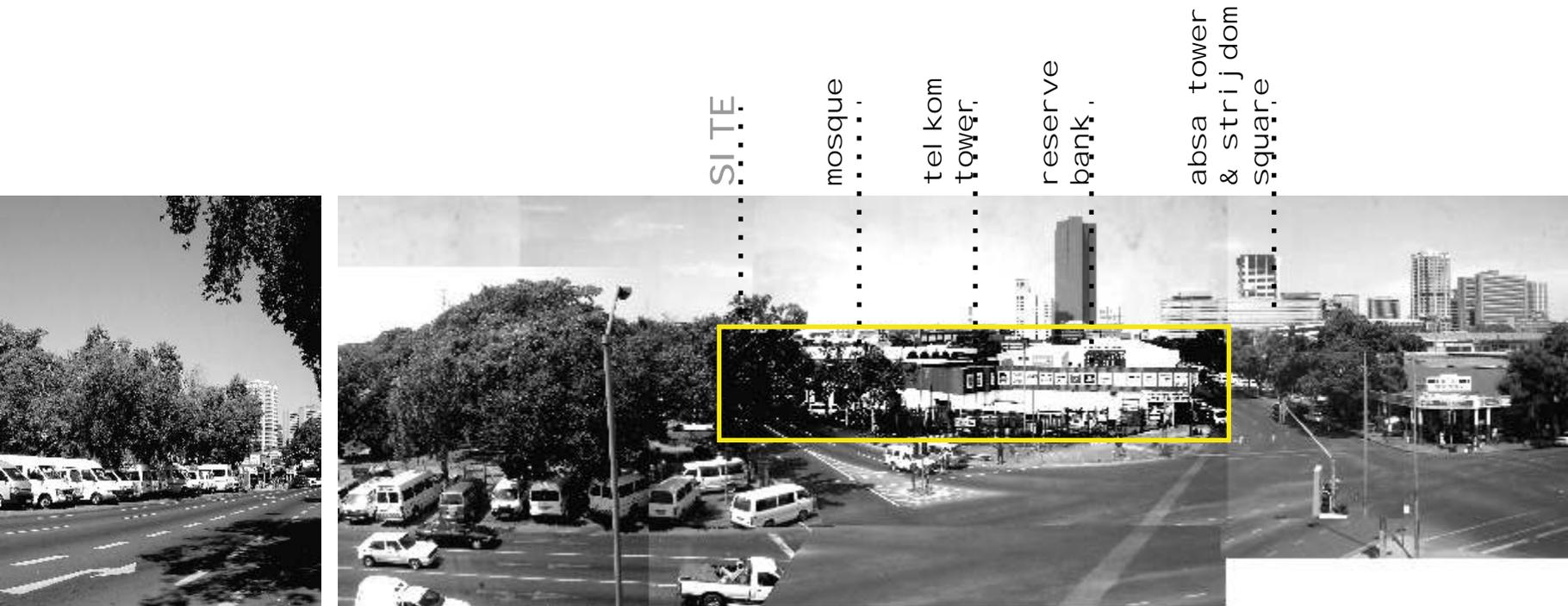
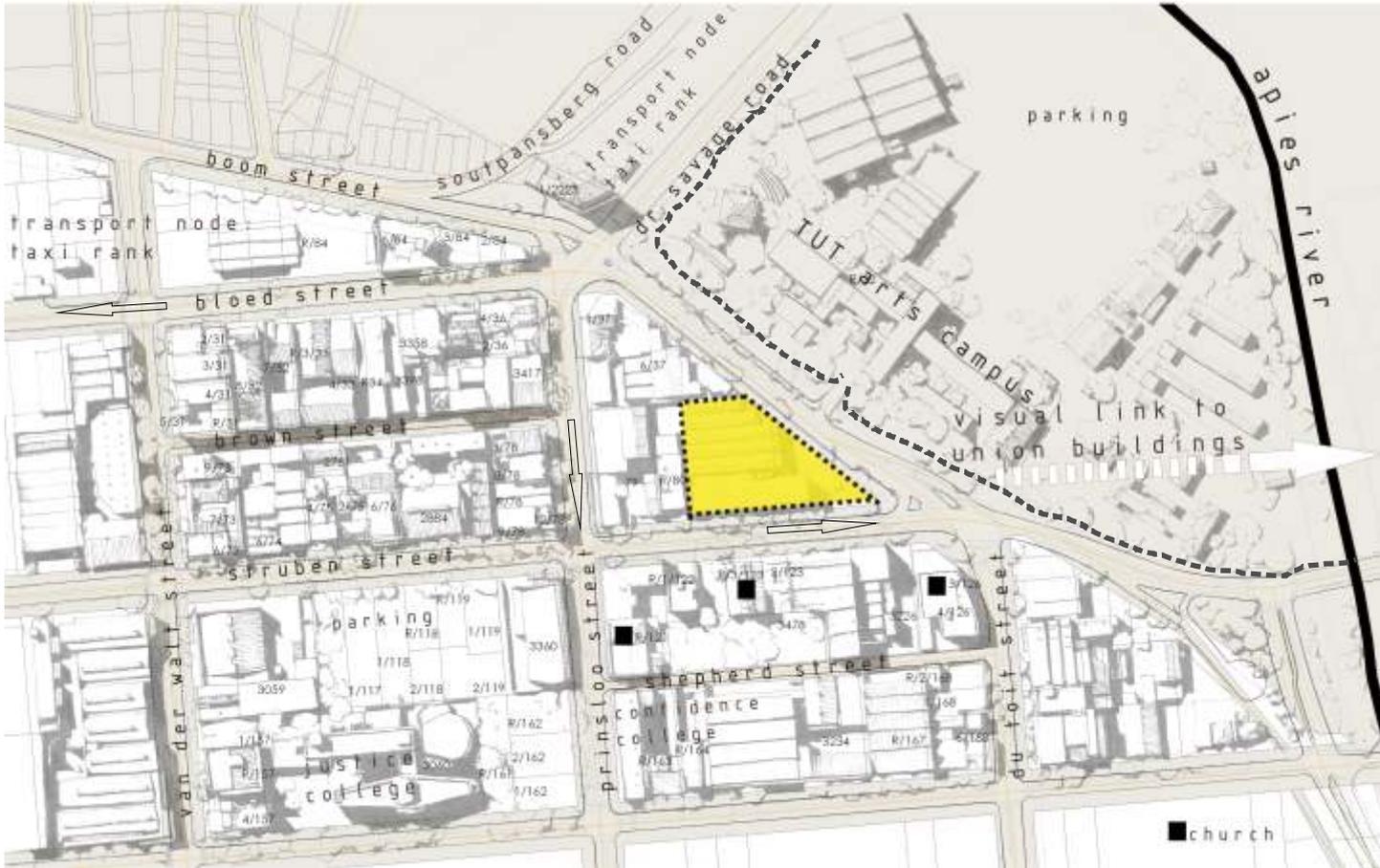


fig 2. 21 Dr. Savage Street Gateway.



_the site:

general legibility



MACRO SCALE
MESO SCALE
MICRO SCALE

fig 2.22 Site legibility.

green structure



On the eastern side of Pretoria the Apies River cuts through the city grid, forming unutilized green pockets of land. Currently the TUT Arts Campus is cut off from the city fabric, functioning in isolation. The existing public space in this area has been taken over by taxis, making it inaccessible to the public.

MACRO SCALE
MESO SCALE
MICRO SCALE

fig 2.23 The disintegration of the city grid.



uses on ground floor

commercial
residential
institutional
light industrial



The ground floor areas are mostly used for commercial activities. The covered sidewalks cater for pedestrian movement and informal trade.

MACRO SCALE
MESO SCALE
MICRO SCALE

fig 2.24 Usage on ground floor.

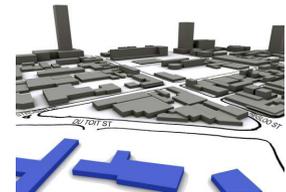
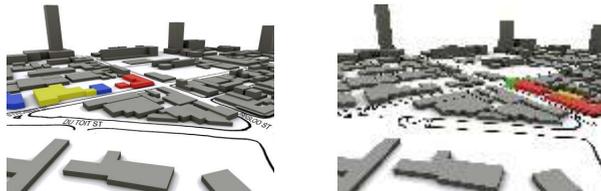


fig 2.25 (left) Site usage.
fig 2.26 (right) TUT Campus usage.



uses from first floor upwards



There are a number of residential buildings in this area, mostly catering for students. A number of flats are currently being upgraded, reflecting a need for residential buildings.

MACRO SCALE
MESO SCALE
MICRO SCALE

fig 2.27 (left) Struben Street usage .
fig 2.28 (right) Prinsloo Street usage.

fig 2.29 Usage above ground floor.



vehicular movement



MACRO SCALE
MESO SCALE
MICRO SCALE

The Dr. Savage Street gateway into the north-eastern area of Pretoria is currently undefined. Prinsloo Street, west of the site, is a one way street leading into the city centre. Struben Street, a quiet street with sporadic activity, is a one way street leading to the Union Buildings that forms part of the Government Boulevard. The eastern city edge is formed by Du Toit Street, a busy two way street.



pedestrian movement



The upgraded taxi rank in Bloed Street and the informal taxi rank in Dr. Savage Street are two important taxi ranks feeding that area. Pedestrian activity occurs mainly around those transportation nodes. Van der Walt and Prinsloo Streets, to the west of the site, are mainly used by pedestrians. Sidewalks in Du Toit Street are uncomfortable as they are blocked by cars from the motor workshops. This has a negative effect, as most pedestrians avoid that area.

MACRO SCALE
MESO SCALE
MICRO SCALE

fig 2.31 Pedestrian movement.



new links

new pedestrian route
new tram stop



MACRO SCALE
MESO SCALE
MICRO SCALE

The new pedestrian network will connect the open spaces with the city fabric. There are three new routes that access the site from the West, South and from the North East. The route from the North East will incorporate the isolated TUT Arts Campus with the city. It will also open up the large green space of the Apies River. The site is also the location for a new tram stop.



strengths, weaknesses, opportunities, threats



Covered sidewalks and tree lined streets give a good perception of this area, but large open and unutilized areas used by taxis have a negative effect. The light industrial buildings have inactive sidewalk interfaces and there is a shortage of public space and public amenities. The small streets and alleys are unsafe because of the lack of activities occurring within and alongside them.

fig 2.33 SWOT analysis.



TPOLOGY: 3 storey warehouse
MATERIALS: Plastered brick structure,
corrugated iron roof,
inactive sidewalk
CONDITON: Good
FUNCTION: Industrial



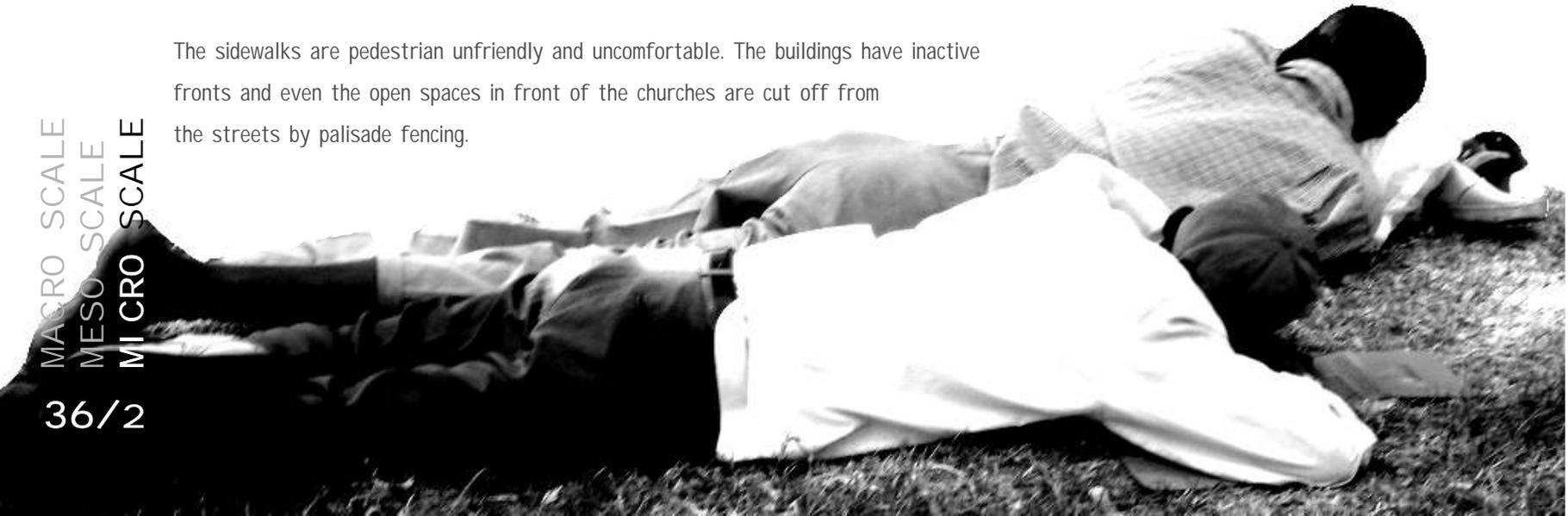
BETHESDA CHURCH
TPOLOGY: Double storey church
MATERIALS: Concrete frame, facebrick infill,
corrugated iron roof, unaccessible sidewalk
CONDITON: Good
FUNCTION: Cultural
OCCUPATION: Occupied

TPOLOGY: 3 storey warehouse
MATERIALS: Plastered brick structure,
corrugated iron roof,
inactive sidewalk
CONDITON: Good
FUNCTION: Industrial

Struben Street is a quiet one way street leading out of the city centre towards the Union Buildings. Only sporadic vehicular traffic passes the site.

The sidewalks are pedestrian unfriendly and uncomfortable. The buildings have inactive fronts and even the open spaces in front of the churches are cut off from the streets by palisade fencing.

MACRO SCALE
MESO SCALE
MICRO SCALE





Legibility; uses; permeability; variety & perception

GLORY CHRISTIAN CENTRE

TYPOLOGY: Double storey church
MATERIALS: Steel frame structure,
corrugated iron roof, tinted windows
Palisade fencing

CONDITION: Good
FUNCTION: Cultural

SPORTMAN'S BOTTLE STORE

TYPOLOGY: Double storey commercial building
MATERIALS: Building rounded around corner, facebrick
structure, glazed shopfront, covered sidewalk
CONDITION: Good
FUNCTION: Retail shops & residential
OCCUPATION: 100% Occupied



fig 2.34 Building facades on Struben Street (southern side).

TYPOLOGY: 3 storey apartment
building
MATERIALS: Facebrick structure,
concrete roof, Palisade fencing
CONDITION: Good
FUNCTION: Residential

TYPOLOGY: 3 storey building
MATERIALS: Concrete frame structure and
roof, facebrick
Palisade fencing
CONDITION: Good
FUNCTION: Commercial & residential



MACRO SCALE
MESO SCALE
MICRO SCALE

fig 2.35 Unfriendly sidewalk. 37/2



Legibility; uses; permeability; variety & perception

TYPOLGY: Single storey commercial building;
high historical value (see area information)
MATERIALS: Plastered brick structure, corrugated iron roof,
Glazed shopfront, covered sidewalk
CONDITION: Poor
FUNCTION: Retail shops
OCCUPATION: 90% Occupied

OZ AUTOBODY AND MECHANICS
TYPOLGY: Single storey Light-Industrial building
MATERIALS: Brick building, corrugated iron roof,
glazed shopfront
CONDITION: Poor
FUNCTION: Automotive Mechanics
OCCUPATION: 100% Occupied



PEARL'S SPORTS BAR

TYPOLGY: Single storey Commercial building
MATERIALS: Concrete frame structure with brick infill,
corrugated iron roof, painted glazing
CONDITION: Poor
FUNCTION: Restaurant and sports bar
OCCUPATION : 100% Occupied

Currently the site is being used as an AutoZone centre. Motor repair activities spill out over the sidewalk, blocking it for pedestrian use. The sidewalk is also covered with trash and oil spills, giving a negative perception of the area. Palisade fencing blocks the visually prominent corner off, which is currently being used as a garbage collection site.

Jacaranda trees (*Jacaranda mimosifolia*) line Struben Street. On the northern side (the site area) the trees are protected from vehicles by original granite kerbs.

MACRO SCALE
MESO SCALE
MICRO SCALE



fig 2.36 Garbage collection point on site.



Legibility; uses; permeability; variety & perception

AUTOZONE BUILDING

TYPOLOGY: Double storey light-industrial warehouse building

MATERIALS: Plastered brick structure, painted, corrugated iron roof, reflective glazing, pre-cast concrete columns

CONDITION: Good

FUNCTION: Automotive spares retailer and workshop

OCCUPATION: 100% Occupied



fig 2.37 Building facades on Struben Street (northern side).

S I T E



fig 2.38 (left) Unfriendly sidewalk.



fig 2.39 (middle) Motor repairs on sidewalk.



fig 2.40 Site corner.

MACRO SCALE
MESO SCALE
MICRO SCALE



Legibility; uses; permeability; variety & perception

AUTOZONE BUILDING

TYPOLOGY: Double storey light-industrial warehouse building

MATERIALS: Plastered brick structure, painted, corrugated iron roof, reflective glazing, pre-cast concrete columns

CONDITION: Good

FUNCTION: Automotive spares retailer and workshop

OCCUPATION: 100% Occupied



Du Toit Street, lined by London Plane trees (*Platanus acerifolia*), is a busy two way street forming the city edge. There is good visual linkage between the site corner and the street, especially from the intersection.



The main vehicular entrance to the TUT Art Campus is in Du Toit Street, opposite the site. The campus is visually cut off from the street and the city by a precast concrete wall. The campus currently offers no interaction with the street.

The smell of food is overwhelming at the northern side of Du Toit Street, where small informal 'restaurants' offer meals for pedestrians.

fig 2.41 (left) Site corner.

fig 2.42 (right) Vandalized London Plane tree trunk.

MACRO SCALE
MESO SCALE
MICRO SCALE



Legibility; uses; permeability; analysis; variety & perception

TV 2 WAREHOUSE

TYPOLOGY: Single storey light-industrial warehouse building

MATERIALS: Plastered brick structure, painted, corrugated iron roof, metal roller garage doors

CONDITION: Fair

FUNCTION: Automotive spares warehouse

OCCUPATION: Unoccupied



fig 2.43 Building facades on Du Toit Street (western side).



fig 2.44 (left) TUT boundary wall.



fig 2.45 (right) London Plane tree lined Du Toit Street.

MACRO SCALE
MESO SCALE
MICRO SCALE



_conclusion:

The starting point for a permeable scheme is to incorporate the existing system of links into and through the site from the surrounding areas. The site is in easy walking distance of the currently upgraded taxi rank in Bloed Street and the informal taxi rank in Dr. Savage Street. For visitors arriving by private transport the site is an important entrance node into Pretoria from Dr. Savage Street, which is the main access route from the north eastern areas of Tshwane. This gateway is currently still undefined.

Pedestrian activities occur mainly to the west of the site, to and from the taxi ranks. Current site uses have a negative impact on the site's perception, and it is therefore avoided by pedestrians. The light industrial buildings and motor workshops have no interaction with sidewalk activities, blocking and polluting sidewalks.

Proposed new links include the new pedestrian network and the new tram line. The site is also the location for a new tram stop and station. These new links will reinforce the connections between the site and the city, opening the site up for new possibilities.

Located across the TUT Arts Campus the site is an important point of intersection. The new pedestrian network will connect the isolated TUT Arts Campus with the city, with the site acting as a transition zone between the city and the city's 'lost space', as described by Trancik (Finding Lost Space, 1986). This 'bridge' makes the green area around the Apies River accessible to the public and it will also make the city accessible for the art students from the TUT Arts Campus.

fig 2. 46 Movement vectors on site.





2. 2_LEGAL CONTEXT

Zoning: according to the zoning certificate of the Department of Housing, City Planning and Environmental Management, erf 3054 Pretoria Central is zoned as general business.

It may not be used for motor workshops, public garages or warehouses; the current uses of the site.

Area: according to S.G. diagram no. 3126/55, of June 1955, the site is 52 925,4 square cape feet (5246,5 square meters).

Building lines: street: 3,5m and sides: null

Servitudes: none

Parking: (refer to annexure_02)

Floor space ratio: 0, 8

Coverage: maximum 80% of erf area

_refer to annexure 01 for further information.



experience
...cultural representation
...images of the city



2. 3_METAPHYSICAL CONTEXT

Movement through time and space is arguably our most fundamental mode of interaction with the world, but new information technology has irrevocably changed this experience. The internet collapses time and space, bombarding us with images from around the world. We are at once connected to and disconnected from everything.

_the visual turn:

The forces of our materialistic global culture visually dominate our environment. Our understanding of reality is increasingly conditioned by the superficial world created by the media. We continually search for experiences in the real world that correspond with the illusions created by television, movies and advertisements which are driven by economic processes. It is the 'wow!' factor that commands our world.

The power of the image is apparent in the current designs of attention-grabbing 'Grand Projects' where the "photogenic qualities" (Pallasmaa 2000: 83) have become a dominant factor. These 'allegories of consumer society', as described by Umberto Eco (1986), surround us everywhere in the form of billboard-buildings, shopping centres and theme styled security estates.

"Buildings are designed as adventures for the senses: overpowering, imperious, entertaining" (Riewoldt 2002:8). The public takes pleasure in this. Of course, everyone likes to be surprised by this new visual opulence.

But, by succumbing to this visual manipulation, we have become shallow beings, detached from the real experiences in this world. Meaning is lost. "Exotic shapes and eye-catching symbolic elements encourage us to visually consume and conceptualize architecture before ever corporeally experiencing it" (McCann 2005: net). Instead of creating existential experiences, this form of architecture reflects short-lasting and uninspiring flat images.



.....“The role of architecture is not to entertain or thrill us but to structure our understanding of

Juhani Pallasmaa, Finnish architect and theoretician, describes the technological and economical forces of our materialistic culture as a threat to architecture. **“In our culture of material abundance, lost in a spiritual desert, architecture has become a threatened art form ... Paradoxically, architecture is simultaneously turned into object of vulgar utility and objects of shrewd seduction”** (Pallasmaa 2000: 84).

_architecture as a tool for communication:

“Architecture on the whole, ceased to embody the leading edge of our world-view, and turned to narrower problems, until it became indistinguishable from mere utilitarian building” (Novak 1995:44).

The ideal of a strong image and the perfectly articulated object can be traced back to the Modern Movement. Modernist architecture favoured pure and abstract surfaces. Its surfaces were flat with no meaning or sensory essence. Thinking was seeing (Van Eeden & du Preez 2005:4).

These aspirations for geometric purity have been shaped by the mechanistic worldview. Initiated by the Enlightenment and based on Cartesian philosophy, the mechanistic worldview arose simultaneously with early capitalism and has dominated western values and ethics for the past three hundred years.

With the rise of western mechanistic science and capitalism came the view of the earth as a dead object, manipulable and exploitable. The focus was on non-interactive, non-relational and non-participatory individual experiences. Modernism stressed the alienation and isolation of the individual.

But the dissatisfaction with Modernism's obsessive abstraction and failure to communicate to us led to the counter-movement of Postmodernism, which rejected the modernist dualistic mindset. Instead it focused on figurative and popular imagery.

It became a cultural logic dominated by aesthetic populism and **the schizophrenic play of the meaningless sign.**

Architecture is always a medium, but this does not mean that



the world and of our very existence, to articulate how the world touches us" (Pallasmaa 2001: 51).....

architecture adorns the environment with artwork
(realities:united 2005: 2). Architecture structures our world
and its task is to communicate to us.

_an emerging new culture:

Our world is changing rapidly and the internet is providing us
with a new look at the world. As with the Renaissance, we are
developing a new perspective of our world. We are standing on
the threshold of a new worldview.

We live in a holistic world of dynamic change with continuous
processes of change and development. "The world is emerging
as a new territory that is constantly reconfiguring itself"
(context 2005: 54). During the past decade networks have
taken over our world, in which everything and everyone is
linked. Networks are present everywhere. Other societies in
the past have been networked, but ours is the first in which
the network is the dominant paradigm (Varnelis 2007: net).

Network culture is not a stylized movement, thus does not

not express itself as an 'ism'. Rather, it can be understood as
a system of socially organised knowledge. We construct our
own knowledge. The 'top-down' method, synonymous with the
mechanistic worldview, is giving way to the 'bottom-up'
community based method. Knowledge datascares, such as
Wikipedia and weblogs, are no longer static and controlled by
just a handful of individuals. It is an open and symbiotic
process with a free flow of information and knowledge.

Networks transform our relationship with objects and space.
The shift in focus moves from individual objects in space, as in
Modernism, to that of relationships, community and
environment. We no longer follow the platonic rules of the
modern movement, where a line formed a boundary, marking
difference and separation. Aesthetic principles are no longer
ruled by their formal geometry. The network is founded on the
principles of interconnectedness and interdependence.

**Boundaries have now become porous and
maleable.** "What characterizes, above all, the difference
between early modern and postmodern landscape visions is the
disappearance of lines, the dissolution of boundaries, both
conceptual and visible" (Cosgrove 1999: 116).



The internet also creates new interactions between other people and ourselves. "Its technology can handle large amounts of data and systematically reveal complexities: it can archive and update information, connect databases, develop comparisons, visualize options, predict developments, and speculate on new directions. It will create a new collective – a new public realm – to accompany it" (MVRDV 2005: 1250).

The internet provides us with experiences of a **new kind of public domain**, which is made up of both public and virtual space. Public space can be defined as "the physical collective space that is freely accessible to all" (Context 2005: 61), while virtual space consists of networks made accessible by new technological devices such as the internet and cellphones. The public domain is thus the commonly shared space and its physical manifestations (Context 2005: 61).

"The places where collective and public cultural activity occur have an important and lasting influence (aesthetic, social, economic and symbolic) on the form and function of towns and cities" (Evans 2001: 1).

Rhizome.org is the oldest online platform for the global new media art community. It was founded in 1996. Their programs support the creation, presentation, discussion and preservation of contemporary art that uses new technologies in significant ways

The rhizome is a model for the workings of a non-hierarchical network, as illustrated by Deleuze and Guattari in 1987. In botanical terms, the rhizome is an underground root system that can branch out in all directions, or break out at any particular point and continue growing. It is thus a system of interconnections, as found on the internet.

It is a model of the way we think in our current world. All ideas are interconnected by an invisible system of connections. As opposed to mechanistic, linear thinking, the rhizome allows for the multiple ways in which ideas are connected.

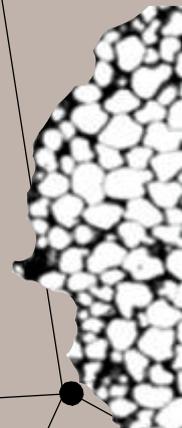


fig 2.48 Rhizome structure.



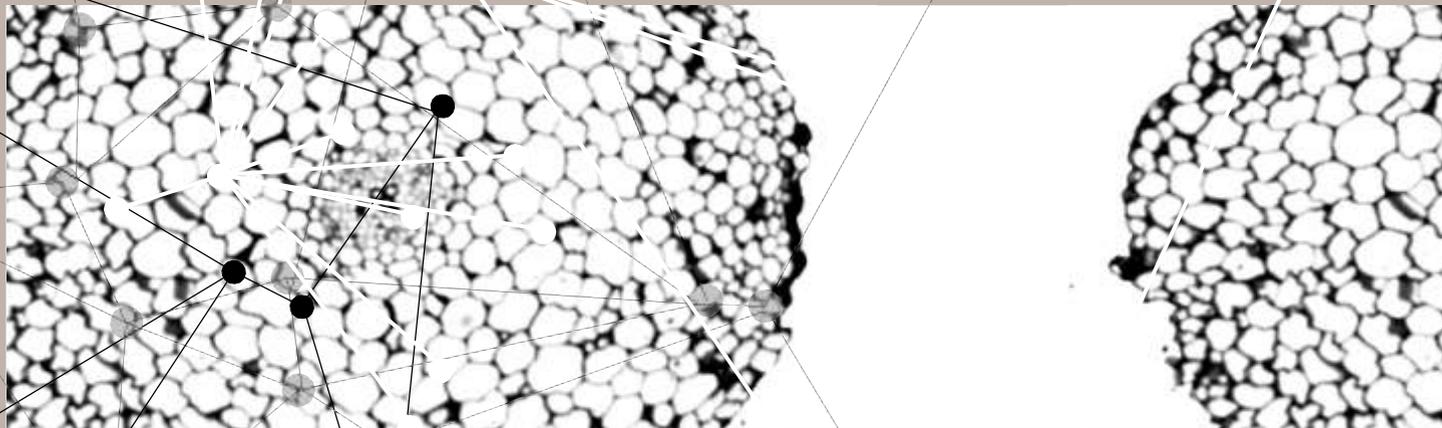
city skin

CITY OF TSHWANE

bl og//asdwufouxhsutai up
bl og//sadsui vbcvcb//ft

new media art community
non-hierarchical network

...the internet, the decentred, boundary less and rhizome pattern of virtual connections that map invisibly across the earth's surface.





“Art can show us some of the new kinds of intellectual and physical or virtual spaces opened up by new media” (Van Eeden & du Preez 2005: 161).

In response to our new emerging culture there have been dramatic shape shifts in the artworld over the past decade. These rapid global shape shifts have highlighted the need to rethink the interface between local African art practices and the international art circuit, to question the changing role of the arts and the production of discourses of a cultural identity in South Africa (CAPE 2007: net).

Within our globalized context there is a growing awareness of the difference between our culture and the world culture. Instead of losing our uniqueness, it is now celebrated and strengthened. “There is now a world culture. It is marked by an organization of diversity rather than the replication of uniformity” (Evans 2001: 129). While the African gaze is drawn increasingly towards the global, the international art circuit ironically looks increasingly towards Africa.

New media technologies become increasingly part of the fabric of our lives and are closely intertwined with issues of globalization, but they have also helped to shed a new light on South African art. Preconceived ideas of African art as 'primitive' and exotic have changed dramatically. The internet has opened up our new visual arts to the rest of the world by dissolving pre-existing boundaries.

The new media technologies are also able to respond to our fluxing African environment, in the same manner that networks do. “...meaning and identity are signified through shifts and changes, and through relationships between things rather than essentialism and fixity. Digital media enable expression of this flux” (Van Eeden & du Preez 2005: 170). They express the non-institutional and non-hierarchical character; “...new media could well provide the non-centralised platform in which meaningful exchange within culture, and particularly within subcultures, can take place” (Van Eeden & du Preez 2005: 171). Thus, artists responding to new technologies have enabled an extensive exchange between a variety of culture makers. The role of digital media “... is primarily one of allowing subcultures to engage with each other as a community by



art without boundaries: visual culture in south africa

exchanging information and views, and of **reinforcing their identities through visual cues**" (Van Eeden & du Preez 2005: 152).

The reason why the arts have reacted so strongly to new media is that it provides alternative avenues of presentation. Many art events today contain digital video, internet art and live performances. It is claiming the world beyond the gallery as its territory. "...people have a desire to take possession of their environment, invest emotionally in the spaces in which they live in order to feel grounded in a locale, and to feel part of their world" (Van Eeden & du Preez 2005: 162). Art within the newfound public domain has taken over the traditional gallery and museum spaces. Art in the Western societies is increasingly seen as being **part of everyday life**.

It was the mechanistic mindset that brought about the fragmentation of art into different genres. This classification system still dominates our education institutions. Again we see the struggle between 'bottom-up' and 'top-down' systems, in which art is categorized into painting, photography, sculpture,

design, etc. But now the boundaries between the different art forms have dissolved. "Art is integrating itself with other practices to create a more diverse cultural sphere. One is no longer able to distinguish between the genres of art and design, to name but two" (Van Eeden & du Preez 2005: 160). Different artists, curators, writers, designers, programmers, students, educators and new media professionals all work together on an equal field.

"There seem to be some major shifts under way in the visual arts in South Africa. This is evident in the move towards less object-based, more project-based art, more non-gallery art, a strong sense of **EVENTS AS ART** (*own emphasis*)" (Van Eeden & du Preez 2005: 160).

CAPE, an organization based mainly in Cape Town, represents the new shift in the art world.



CAPE, is a cultural project, deeply rooted in South Africa. It is an ongoing program of projects that aim to address the needs of South African Art within its African and global context; a stage to explore African visual culture.

CAPE is committed to provide a platform where discussions can take place and where the gap between art and the audiences can be bridged. It is a response against the current lack of African-based dialogue on art and culture, "reclaiming art and culture" (Mervis 2006: 14).

The aim is to connect the city of Cape Town with South Africa, Africa and the world by means of contemporary art events which are rooted in the local but global in impact. By exploring the multilayered diversity and complexity of our environment it strengthens our roots and sense of belonging.

The urban fabric is used to catalyze cultural production. Cape Town is viewed as "a laboratory, an artist's studio, in which innovative but sincere encounters with the role of the artist, the location of artists practice, and the production of discourses of cultural identity in contemporary society can take place. CAPE addresses the global through this fine-grained attention to the texture of the local" (CAPE 2007: net).





Normal conventions and power relations, socio-economic and geographic divides are challenged. It manages to offer a view of art as an integral part of daily life, accessible and vital to the development and transformation of South Africa. "Africa can take control of the way it is perceived" (Mervis 2006: 15).

Sessions are held every two years. issues concerning the South African art world are addressed in a wide range of workshops, discussions, screenings and seminars. These sessions are then followed up the following year by major art events, which CAPE refers to as Manifestations. These events are not bound to one specific location but operate within a network of various venues, ranging from galleries, museums, stores and restaurants to public spaces, petrol stations and websites. They are conceived as a journey with various meeting points for cross cultural exchange and multidisciplinary art experiences.



_the next step

In the past art was considered as freestanding objects in a museum space or as 'beautiful' paintings against walls. Since the Renaissance 'space' in paintings was represented in the form of perspective. It was only with the rise of artists, such as Picasso and Piet Mondrian at the beginning of the twentieth century, that space was seen for the first time as independent of its formal container, its form. Fragmented perspective, and thus time, was introduced into art.

Now, there is a call for architects to take it a step further. Just as artists have embraced the rise of new digital technologies, it is now our turn to do the same. We have to design with the fourth dimension, that of **experiential events**.

" Architecture is both about space and about the events that take place in that space"

(Tschumi 2000: 12).



3. 1	FRAGI LE ARCHI TECTURE	[04]
3. 2	EVENT GENERATORS	[11]
3. 3	FLEXI BLE ARCHI TECTURE	[24]



Artists work in design processes that are non-linear, informal and highly interactive. They can draw inspirations from anywhere: from each other, the occasional visitor, their immediate surroundings, their city, and everyday life.

Artists switch between individual and collaborative work; they share knowledge and arrange spontaneous meetings. While working they circulate the space, expanding and contracting it according to their current needs (Atelier 2002 :5). They require environments that can instantly be transformed and re-programmed; an architectural space that is not static, but constantly changes with people.

Three design methods were identified that are able to respond to these conditions:

- _ fragile architecture
- _ event generators
- _ flexible architecture



"Architecture is one of our most fundamental existential expressions, and it communicates simultaneously on several levels. We are usually affected only by the surface message and ignore the unintentional unconscious messages, but they are the most significant ingredient in a work of art" (Pallasmaa 2000:51).



fig 3.1 Wood and steel , nature and cul ture. F i n n i s h P a v i l i o n , S e v i l l e , 1 9 9 0 .



“Abstraction and perfection transport us into the world of ideas, whereas matter, weathering and decay strengthen the **experience of time, causality and reality**” (Pallasmaa 2000: 79).

Materials and surfaces have a rich and complex language that evolves and changes over time. But, the flat surfaces of the Modern Movement were incapable of dealing with time.



FRAGILE
EVENT
FLEXIBLE

04/3

fig 3.2 (above) Pessac workers' housing, Le Corbusier
fig 3.3 Unable to deal with the effects of time, Modernist buildings weather

, 1925
badly

3. 1_FRAGILE ARCHITECTURE

A strong image requires focused vision. This makes us, the observers, outsiders of our environment. But peripheral vision places us within our immediate spatial environment; encouraging participation.

In this fast-paced and visually dominated environment we need to understand and design for the intimate experience of a place. We have to re-embody ourselves in the world and encourage an intersubjective visual and tactile experience of the architecture. The intimate experience of space that engages both body and mind becomes important.

Any design denotes a primary, utilitarian function, while connoting a series of secondary functions or representations that communicate a particular worldview. According to Umberto Eco, "to function properly, objects must not only be functional but must communicate or denote that function and, second, that they can denote that function only on the basis of a code tied to established habits and expectations (i.e. worldview)" (Harries 2000:91). In the Cartesian representation of the

Modern Movement form and outline are primary, constant qualities that we can grasp and hold conceptually, as opposed to secondary qualities which are constantly in flux. "... in a world whose most fundamental characteristic is its fluxing relationships, these 'secondary' qualities become central" (McCann 2005). The secondary qualities of light, surface and experience are often resistant to language in a way that shape and symbolism are not.

Pallasmaa calls for a haptic and tactile architecture that promotes intimacy, engagement and experience. This 'weak' or 'fragile' architecture opposes the architecture of strong temporal images. Fragile architecture is responsive, contextual and concerned with the real sensory experience of our environment. By using peripheral vision, we can experience the architectural reality (Pallasmaa 200: 83).

Principles of experiential, fragile architecture was the first concern in the design development.

fig 3.4 Peripheral vision found in the Finnish Pavilion, New York, designed by Alvar Aalto in 1939.

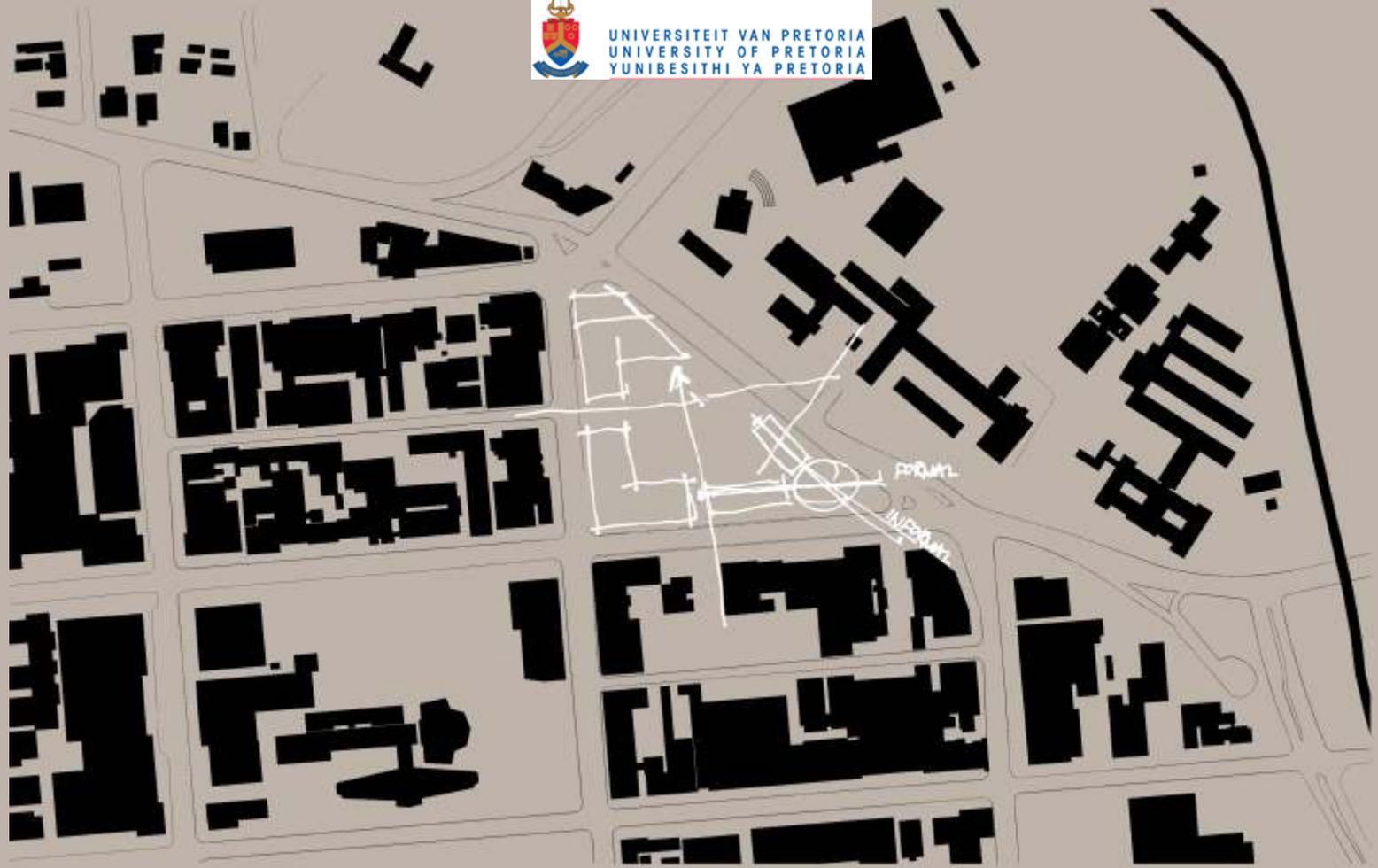
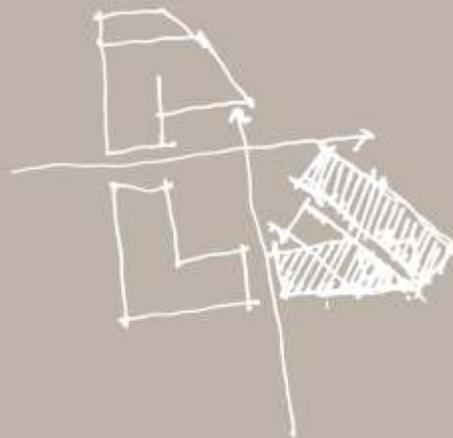


fig 3.5 Movement vectors on site.



_design development 01

The pedestrian movement patterns are vectors that cut into the solid building mass and shape the building. They split the building up into separate, but linked clusters.

The main element is the corner, which acts as a 'hinge' between the fragmented clusters. Two wings shape the eastern and western boundaries of the enclosed public square.

Each of the two wings has a different character. The southern wing on Struben Street, is the formal axis. The wing on Du Toit Street is freed from the city grid and represents the informal and 'lighter' side of the building.

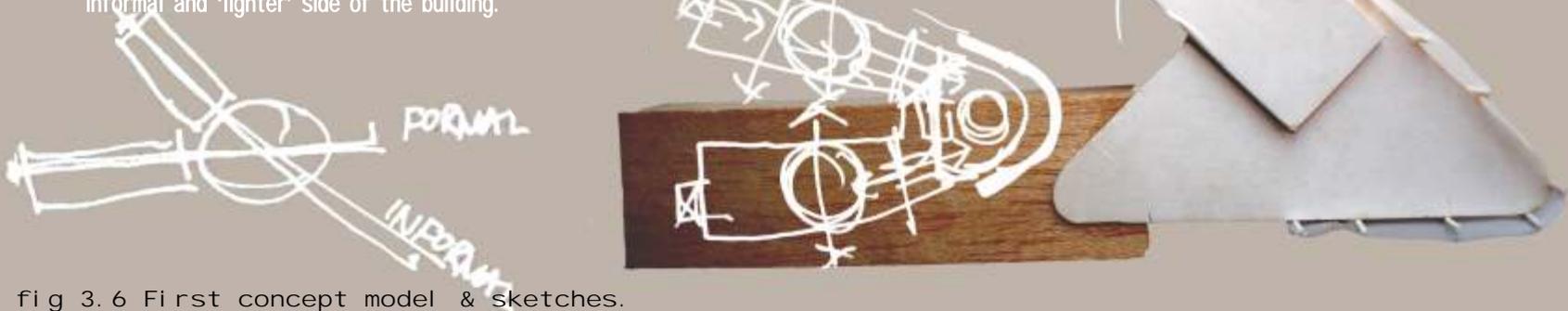


fig 3.6 First concept model & sketches.

....."A movement diagram becomes architecture" (Tschumi 2000: 39).....



fig 3.7 Development of building clusters.

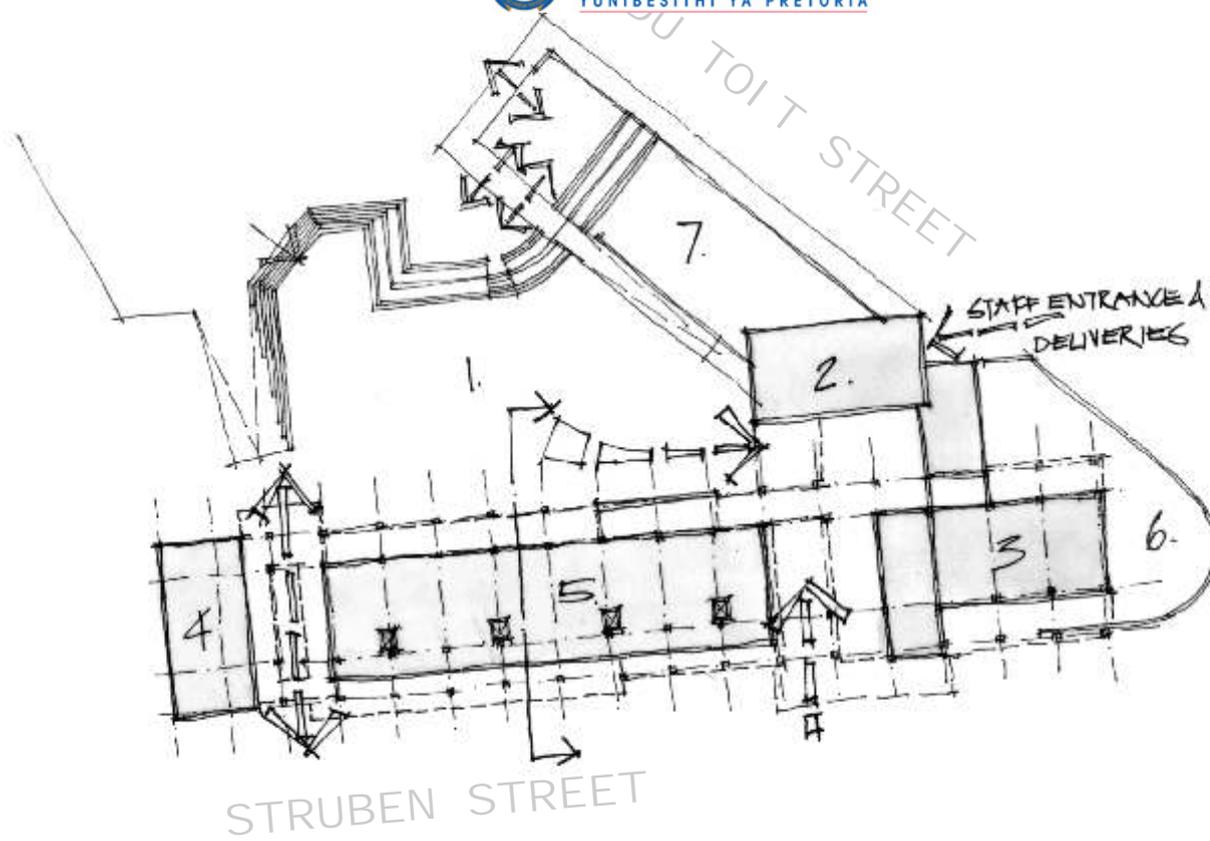


fig 3.8 Ground floor plan.

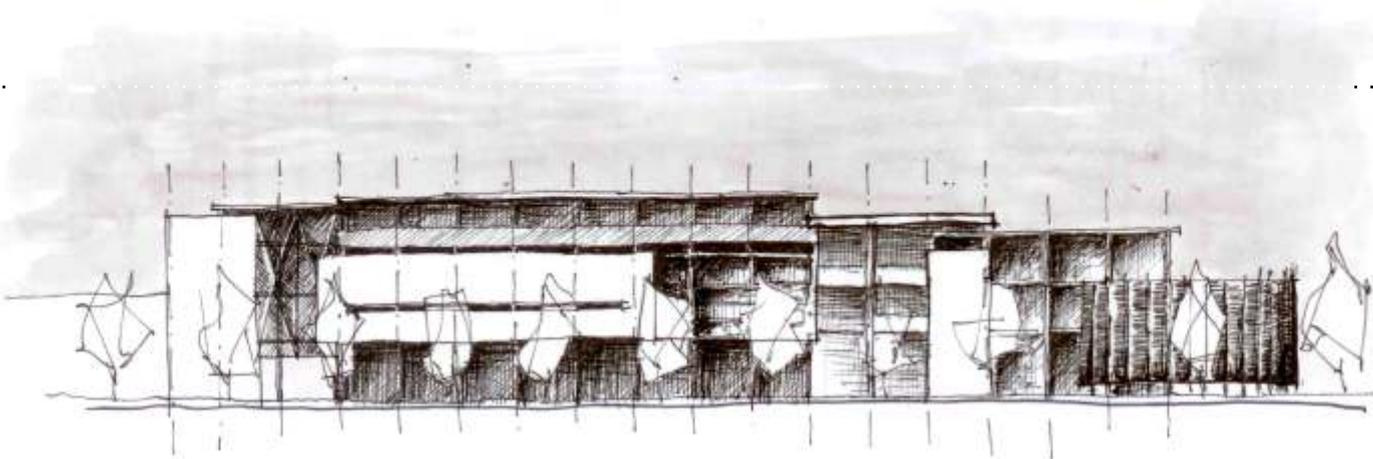


fig 3.9 Elevational study on Struben Street.

first concept:

1. public square
2. reception and main circulation area
3. café
4. secondary entrance
5. restaurants
6. semi-public courtyard
7. multipurpose hall
8. offices (third floor)
9. gallery (first floor)
10. digital gallery
11. studios
12. studios
13. archives (second floor)
14. residential

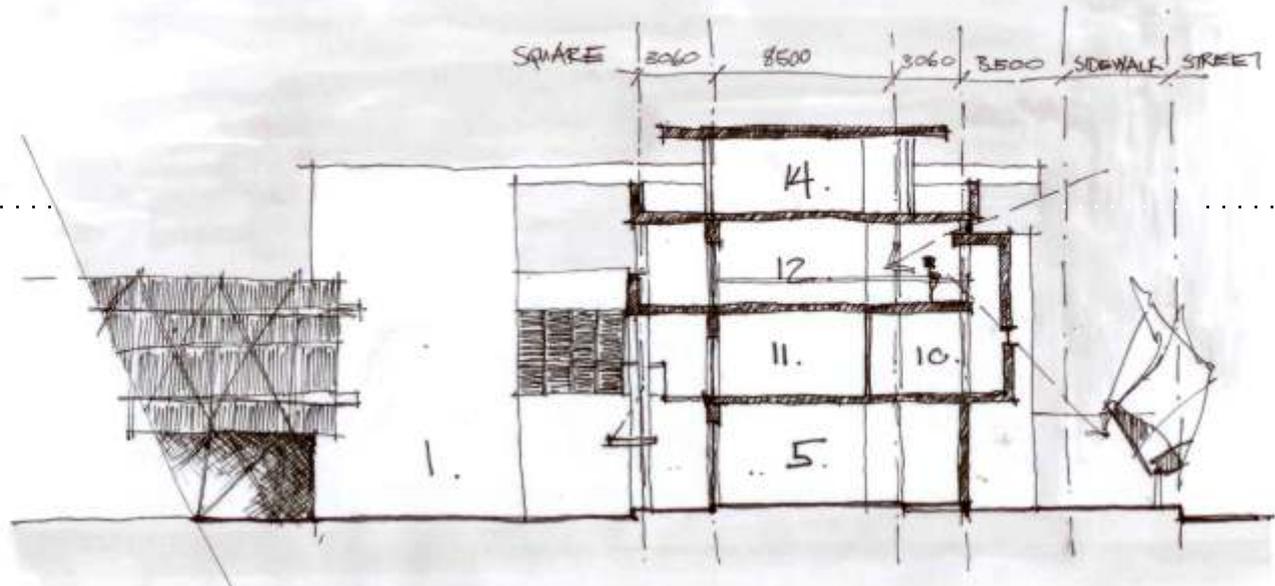
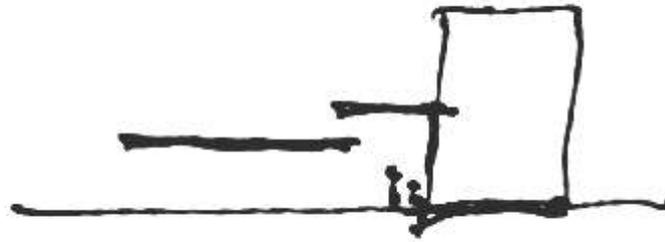


fig 3.10 (above) Concept sketch.

fig 3.11 Section through the southern wing, first concept.

In the first concept the basic layout of functions was established. The design caters for mixed-use activities. Commercial functions are located on the ground floor and the more private functions are located at higher levels within the building.

There is a clear division of the building into the two separate wings. The southern wing has a well established character that responds to the surrounding buildings. The informal, un-programmed studio spaces in the eastern wing are still undefined, but its 'lightness', in contrast to the southern wing, already becomes clear.

In the first concept the screened-off corner does not respond to the activities on the street. The connection between the two wings requires a more interactive streetfront; allowing people in the street to appreciate the activities within the building.

In order to realize the aim of pedestrianizing Pretoria, it became clear that underground parking had to be provided on this site. Parking facilities that are located at the important gateways into the city allow visitors to leave their cars and then walk and/or use the public transport infrastructure within the city. This required a new grid layout that could accommodate the underground parking facilities.

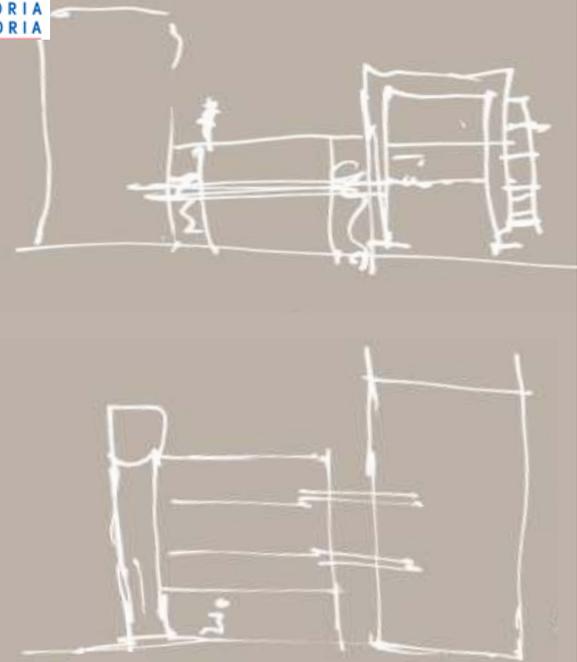


fig 3.12 Concept elevation sketches.

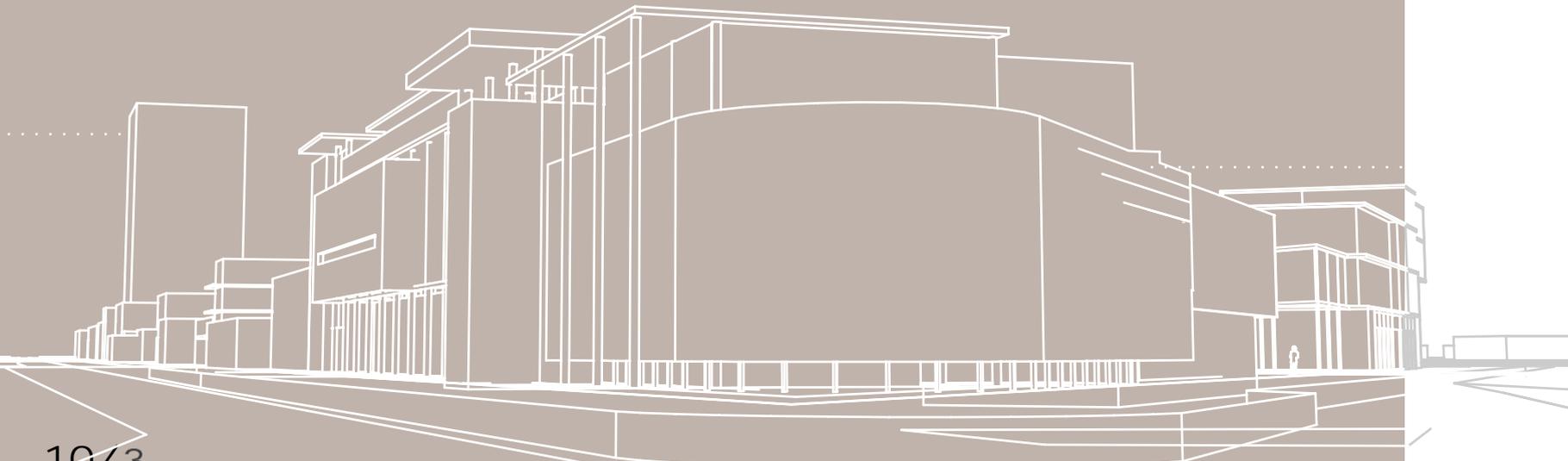


fig 3.13 Three dimensional study of the corner, first concept.

3. 2_EVENT GENERATORS

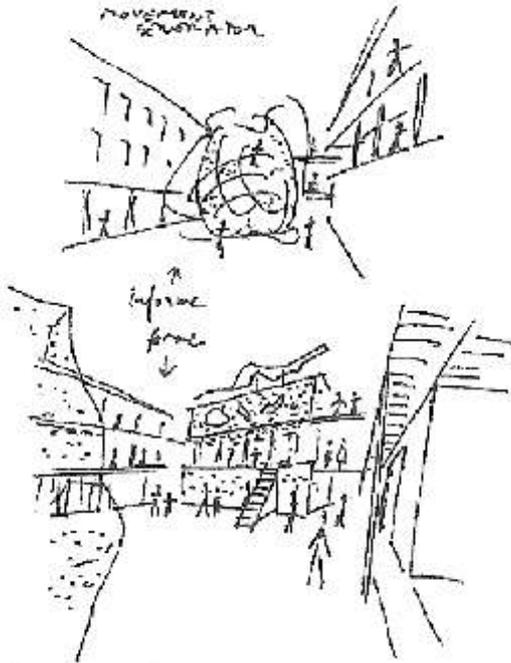


fig 3.14 Sketch of an event generator within a central public space.

“Revealing hidden potentialities or contradictions in a program, and relating them to a particularly (or possibly exceptional) spatial configuration, may create conditions for unexpected events to occur”

(Tschumi 2000: 13).

An event is an indeterminate set of unexpected outcomes.

In his book, *Event Cities 2* (2000), Tschumi identifies five devices that are generators of events. They act as condensers of the city, as much through their programs as their spatial potential. They accelerate a cultural or social transformation that has already started (Tschumi 2007: net).

1. SPACE, EVENT, MOVEMENT_ analysis of the interaction between space, event and movement.
2. VECTORS_ dynamic movement/flow/force; an organizing device.
3. VOIDS AND SOLIDS_ public and semi-public spaces 'carved out' in solids.
4. ACTIVATORS_ activate the void by intensifying the density of movements.
5. ENVELOPE_ an 'in-between', a double skin that becomes the unprogrammed space activated by the movement of the crowds, for instance walkways or balconies. The envelopes also can be animated through projection, reflection, or integrated screens and, therefore, become events themselves.



In two Schools for Architecture, one at the outskirts of Paris and one in Miami, Tschumi clearly demonstrates the application of the devices.

Both schools are similarly organized and feature dramatic social gathering spaces. In both a central unprogrammed space is defined and activated by two wings, the 'generators'. These wings contain the public functions, one providing space for studios and the other offices. The circulation corridors, which act as movement vectors, activate the public spaces.

In the **Marne-la-Vallée School of Architecture**, Tschumi compares the building to a small city that consists of small clusters. All programmed activities are arranged around an un-programmed large central space, the 'event' space. The building clusters are linked by promenades and walkways, which can have several points of departure (Tschumi 2000: 521).

The school features wide corridors that allow people to stop and chat, without blocking the passage. These informal 'in-between' spaces are thus cross-programmed, allowing different activities to take place within them. They are social and cultural gathering spaces, where one can see the constant movement of people, thus activating the space.





In the **FIU School of Architecture** the same concepts are applied, but they adapted to fit the new context.

At the FIU School the connections between the building clusters are located outdoors. The clustering of the buildings creates a new awareness of the surroundings, as well as a sense of community among the students (Pearson 2003: 104). This school demonstrates how the pavilions within the large un-programmed space, which Tschumi calls 'generators', are shaped by the movement of people. These generators are places of social gathering.

The outdoor void, the 'in-between' space, becomes as important as the inside spaces. "The void becomes a public space for appropriation, the potential place of 'events': the unprogrammed void is defined by the inner edges of a programmatic solid. The void is often an in-between – a place that falls between the stated requirements of a given program or a rigid urban context" (Tschumi 2000: 12)

In both of these projects Tschumi demonstrates how un-programmed space is activated by the density that surrounds it. It... "becomes the space for celebrations and balls, encounters and debates, projections and artists' installations, the most serious symposia and avant-garde exhibitions" (Tschumi 2000: 519). It therefore becomes **the space for events.**

fig 3.15 Walkways connecting buildings at the FIU School.

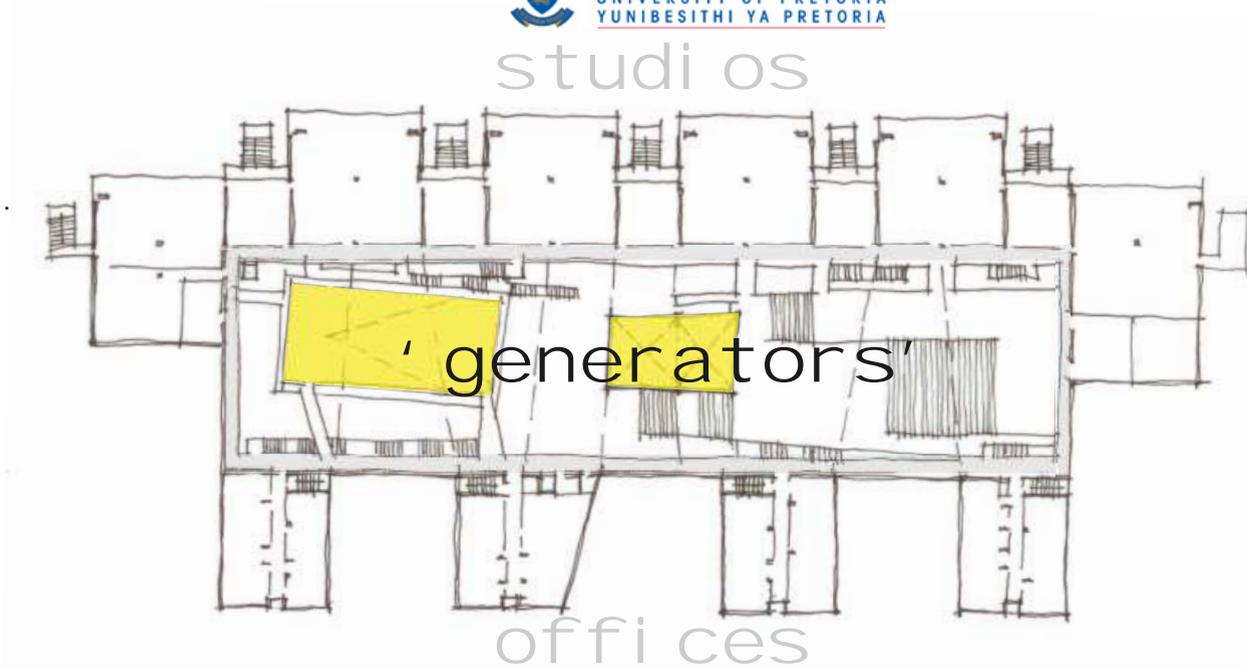


fig 3. 16 Marne-la-Vallée School layout. The internal public space is covered with glass roof.

“Tschumi creates a robust stage set for dramas” (Slessor 2000: 66).



fig 3. 17 Flexible studio space with mezzanine level.

FRAGILE
EVENT
FLEXIBLE

Tschumi also works with a flexible studio layout. The double volume studio spaces with mezzanine levels allow both individuals and larger groups to be accommodated.

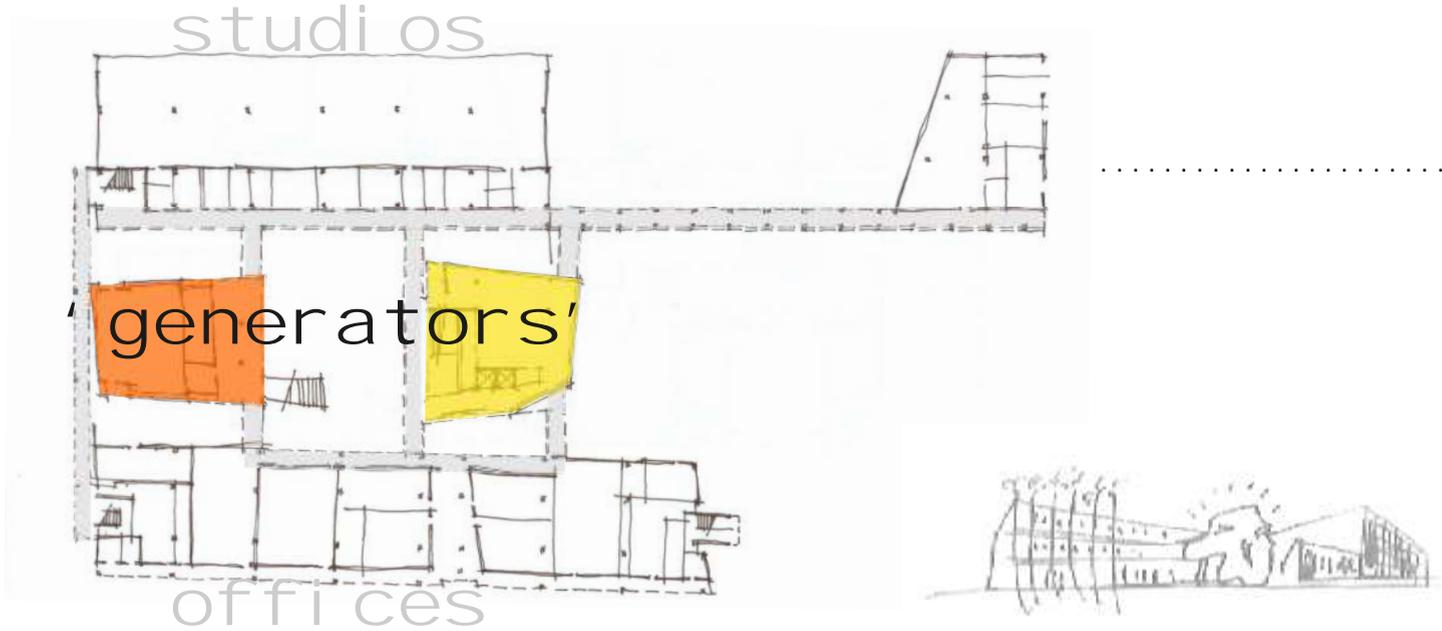


fig 3.18 FIU School. The internal public space is open.
fig 3.19 Sketch of 'generator'.



fig 3.20 (left) Walkways connecting buildings.

fig 3.21 (right) View of the central lecture hall; a 'generator', which acts as a melting pot of cultures.

FRAGILE
EVENT
FLEXIBLE



The 'generator' devices, as defined by Tschumi, have shaped the design in a number of ways; activating and shaping the building clusters:

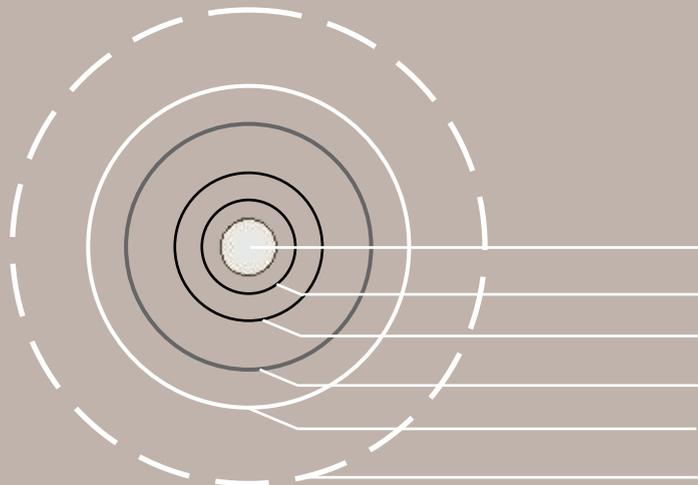
_design development 02

The building 'core' at the corner is shaped and defined by the movement vectors of the pedestrians. This central circulation core is the un-programmed 'in-between' space. It is activated by the density of the two wings and by the movement of crowds through the space. The activities within this space are visible at all times, informing the passer-by about the current activities within the building and within the artworld. This promotes participation and interaction between the art 'creator' and the viewer (see fig 3.23).

By clustering the buildings around voids the outdoor spaces become as important as the interior spaces.

The two wings have wide corridors and balconies, forming double skin facades. Movement through the building activates the 'in-between' space. This double skin thus provides social gathering spaces, and acts as a mediation system between inside and outside.

The building envelope is traditionally seen as a static, two dimensional surface, but by allowing the skin layers to be occupied it allows the user to reconfigure the interior program. The experiential qualities of the public space are increased by the use of animated screens. This allows the interior to spill out into the square; activating the outdoor space.



art creator
collaboration between artists
performers
immediate audience
media audience
myth and memory

fig 3.23 Levels of participation in art events.



1.

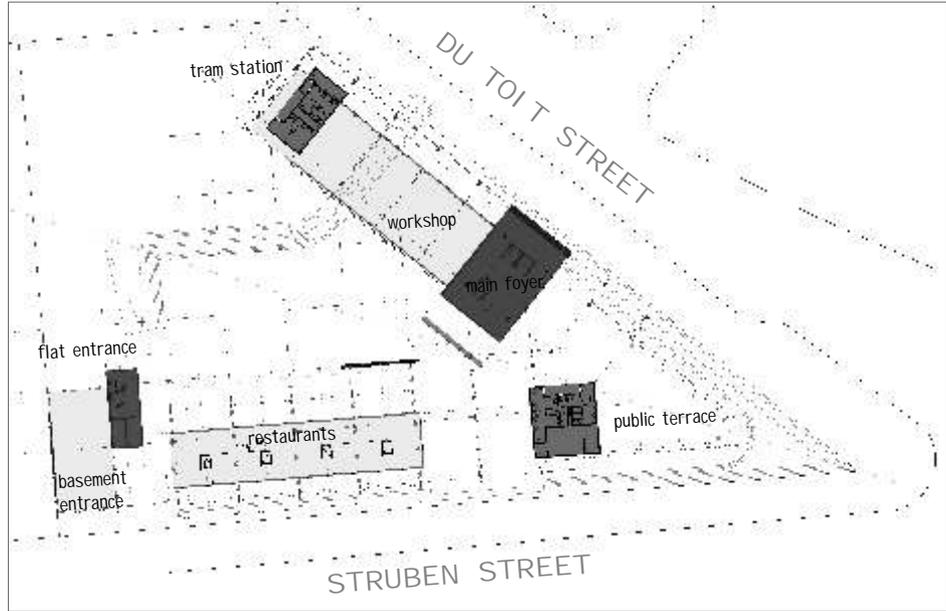
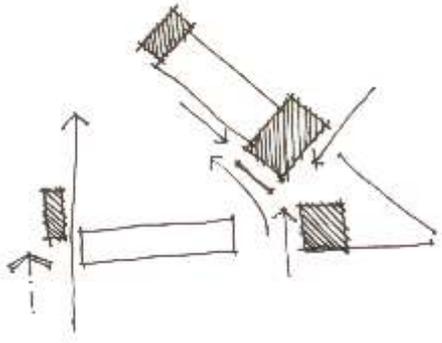


fig 3.24 Ground floor plan, 16 June 2007 concept.

2.

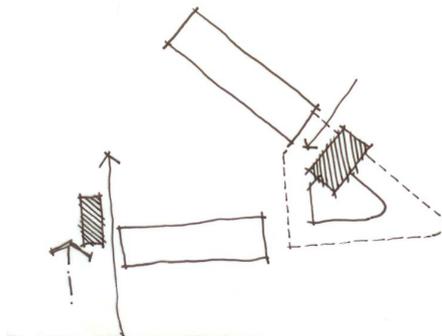


fig 3.25 Ground floor plan, 7 July 2007 concept.

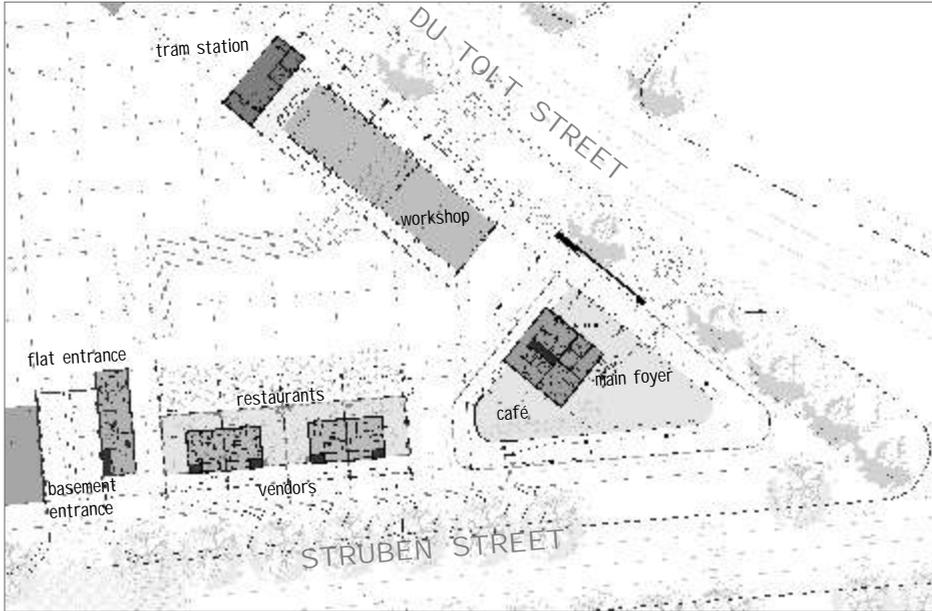


fig 3.26 Ground floor plan, 13 August 2007 concept.

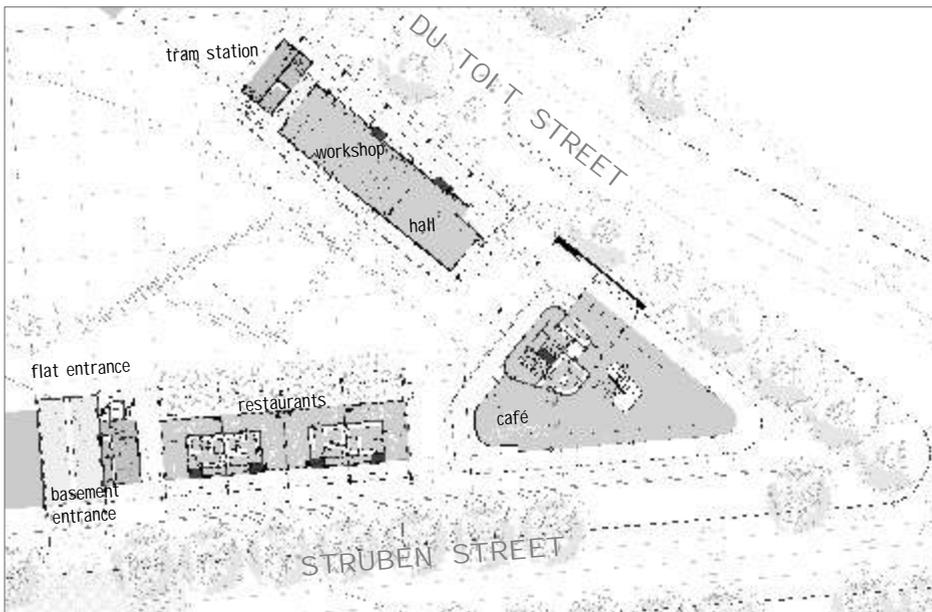
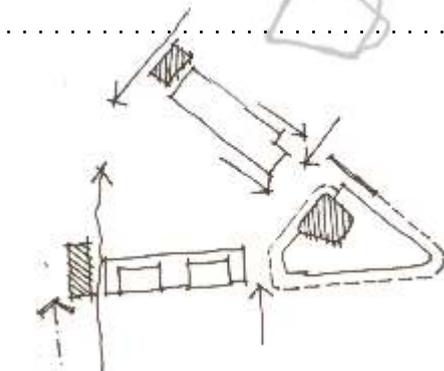
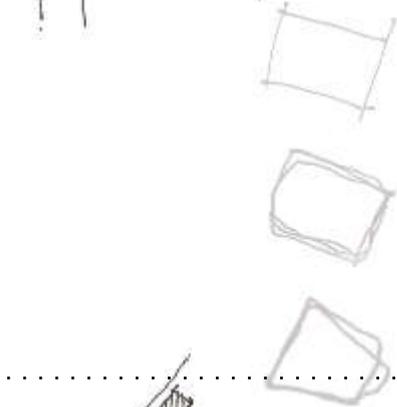
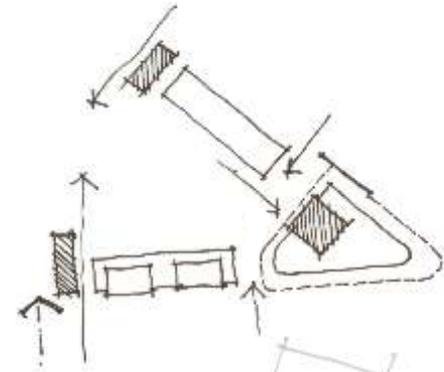


fig 3.27 Ground floor plan, 28 August 2007 concept.



3.

4.



1.

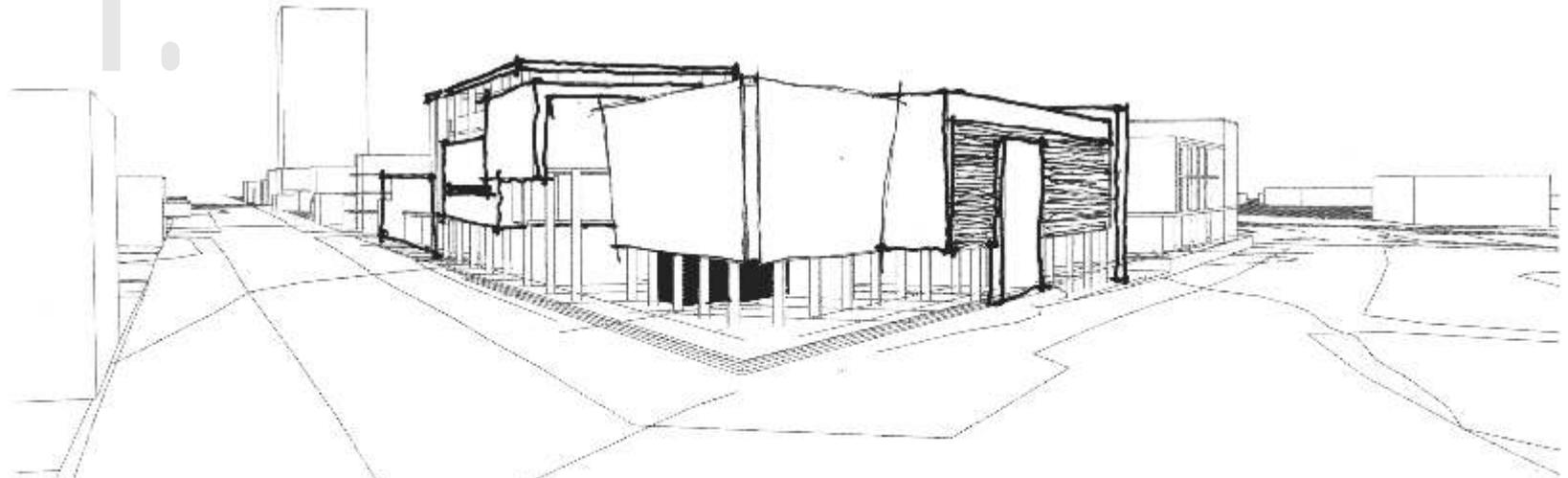


fig 3.28 Concept sketch (16 June 2007).

2.

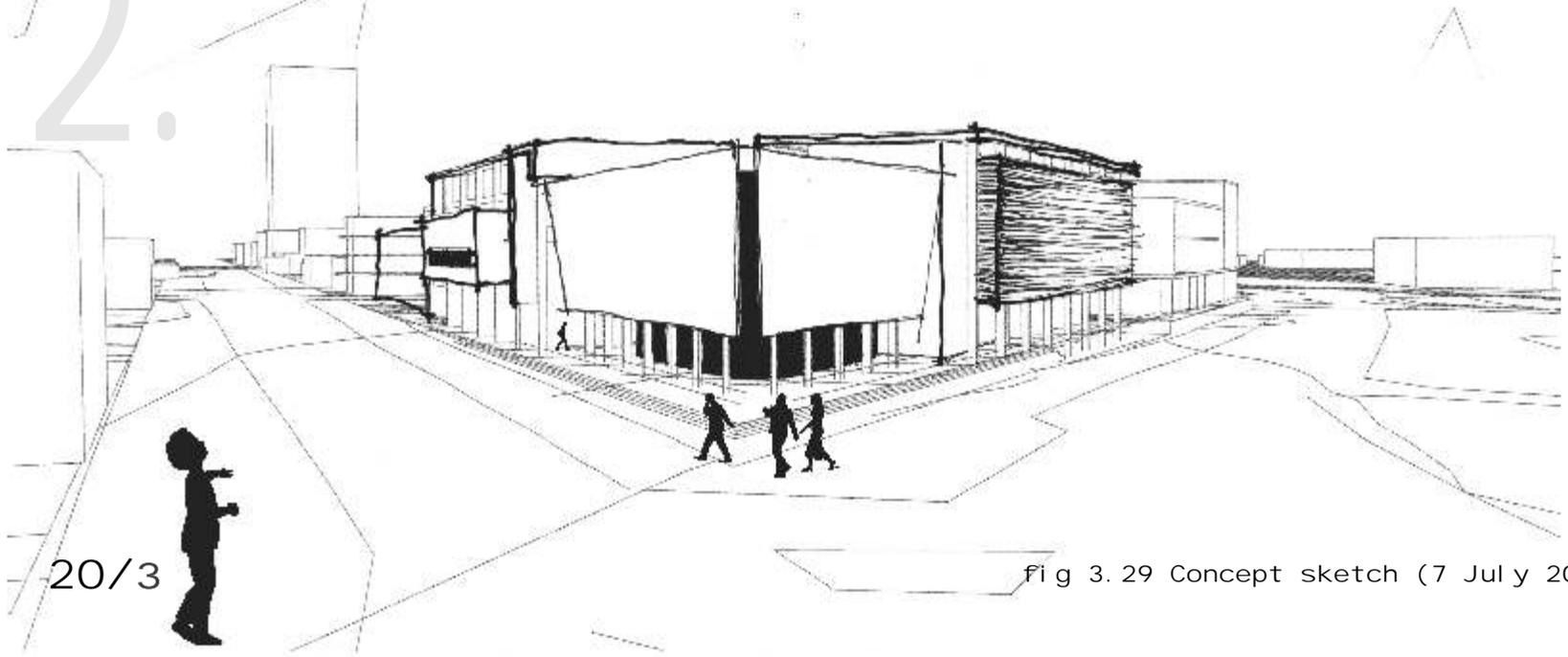


fig 3.29 Concept sketch (7 Jul y 2007).



3.

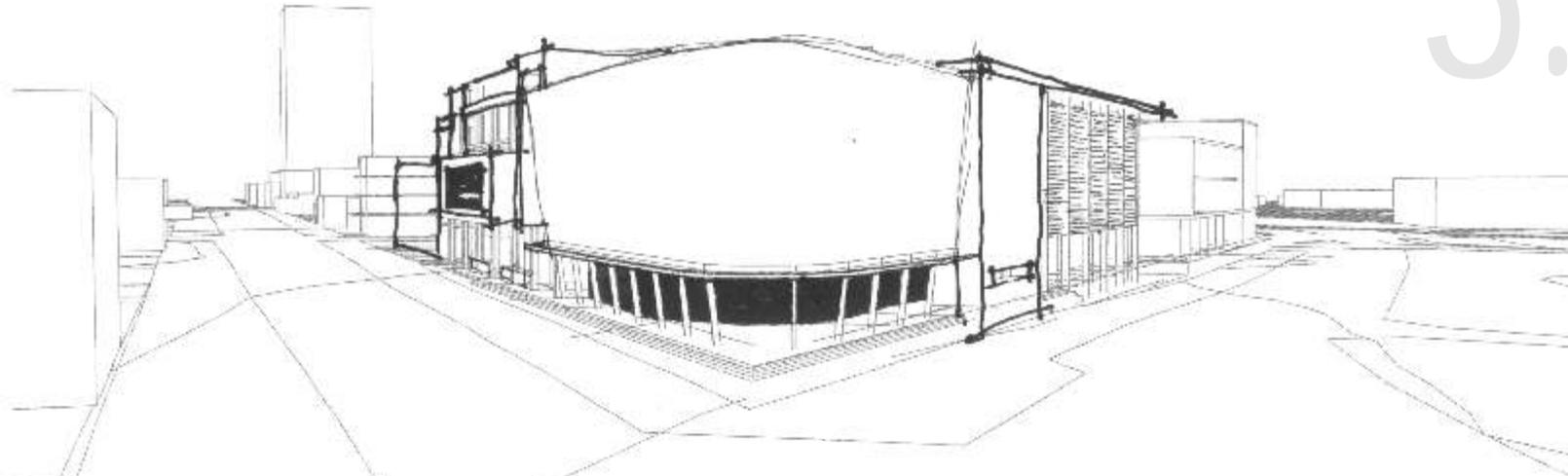


fig 3.30 Concept sketch (13 August 2007).

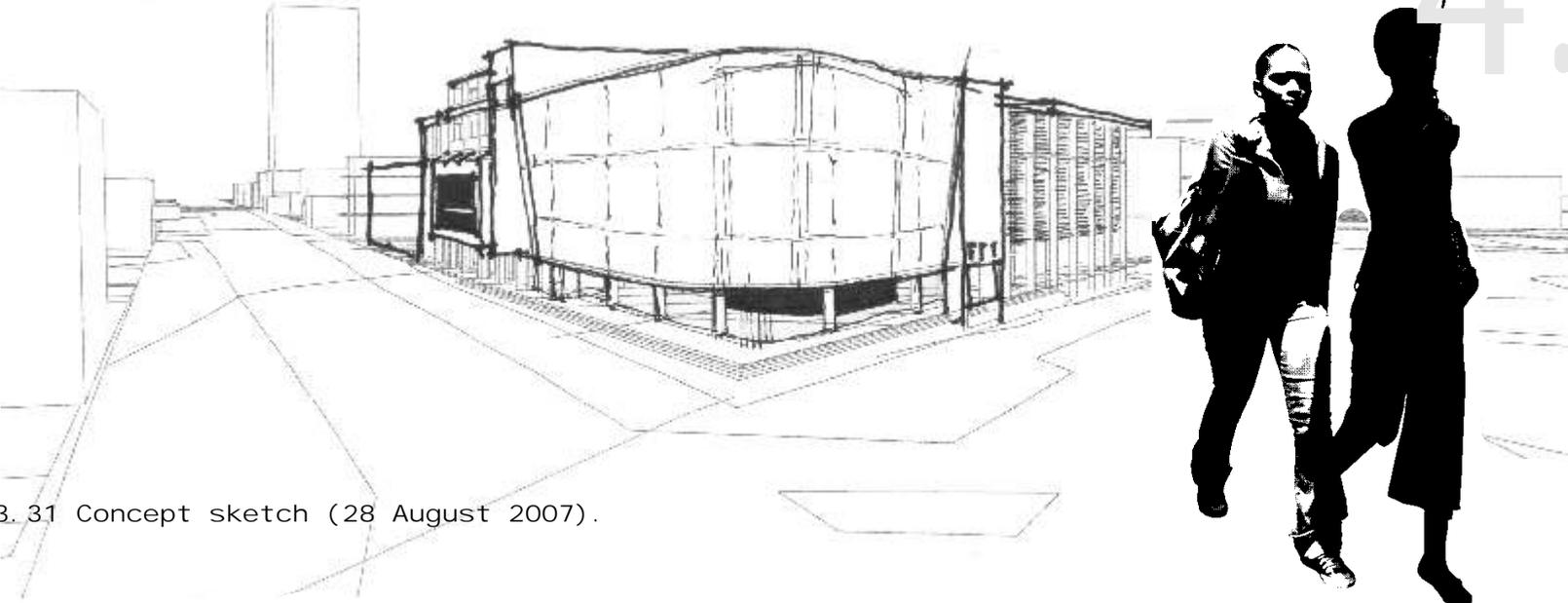


fig 3.31 Concept sketch (28 August 2007).

4.



Prada Store, New York. R. Koolhaas, 2001.

The main idea was to rethink the traditional concept of shopping. The act of shopping becomes an experiential event. The store consists of a series of spaces that trigger surprise and the unexpected event.

In the entrance (as seen in this figure) the space is cross-programmed and the elements are designed to generate cultural activities. The large stair is designed as a display area, but one is also invited to have a seat and consequently this space also functions as an area for relaxation.





On the other side the floor raises into a stage-like ramp. Metal boxes in the ceiling display products and run on a wire system that can easily be rearranged. This allows the space to be instantly reconfigured.

The communication between staff and the customer is made as flexible as possible. Screens on clothes racks and built into furniture are part of an information system that displays video clips, drawings, fabric samples and images. This makes the shopping experience an interactive event.

The customer is given as much information as possible, allowing them to understand the new concept of shopping. The design successfully communicates its intentions to the visitor and he or she can immediately understand the space and participate in the event.

fig 3.32 The shopping event space.



CHANGE =

FRAGILE
EVENT
FLEXIBLE

This project aims to be a knowledge hub for artists and aspiring artists. It aims to provide a framework, an 'envelope', in which artists can work freely and insert a second 'skin'. In order to provide these flexible environments, various ways in which 'events' can be accommodated within buildings were investigated.



3. 3_FLEXIBLE ARCHITECTURE

We are flexible beings. "The success of the human race lies in our ability to be flexible" (Kronenburg 2007: 14). We move about at will, manipulate objects and operate in a wide range of environments. Our more or less sedentary lifestyle is becoming increasingly flexible in the face of our rapidly changing social, economic and technological environments.

We now demand this degree of flexibility from our surroundings as well. Buildings have a permanent site with set services, but we seek architecture that adapts, rather than stagnates; transforms, rather than restricts; is dynamic rather than static; interacts with us rather than inhibits us. But "the vast majority of western architecture is static, of single purpose and with standardized fittings and furniture" (Kronenburg 2007: 16)

All buildings can accommodate some degree or level of change. We open windows, close doors and move furniture around. But the effort, inconvenience and costs required to release further long-term change makes it a flexible building or not.

"Flexible architecture consists of buildings that are designed to respond easily to change throughout their lifetime. The benefits of this form of design can be considerable: it remains in use longer, fits its purpose better, accommodates users' experience and intervention; takes advantage of technical innovation more readily; and is economically and ecologically more viable" (Kronenburg 2007: 7)

Flexibility can be varied on different levels. The infrastructure is usually relatively fixed, the building frame is stable, the building skin can easily be revised and internal partitions can quickly be relocated; "in this way we can create architecture that relates to the place in which it is located, but still allows for significant change in its use" (Kronenburg 2007: 100).

An adaptable building is "a magical stage that would allow dramatically different activities to occur within the same, but changing, space" (Kronenburg 2007: 14).

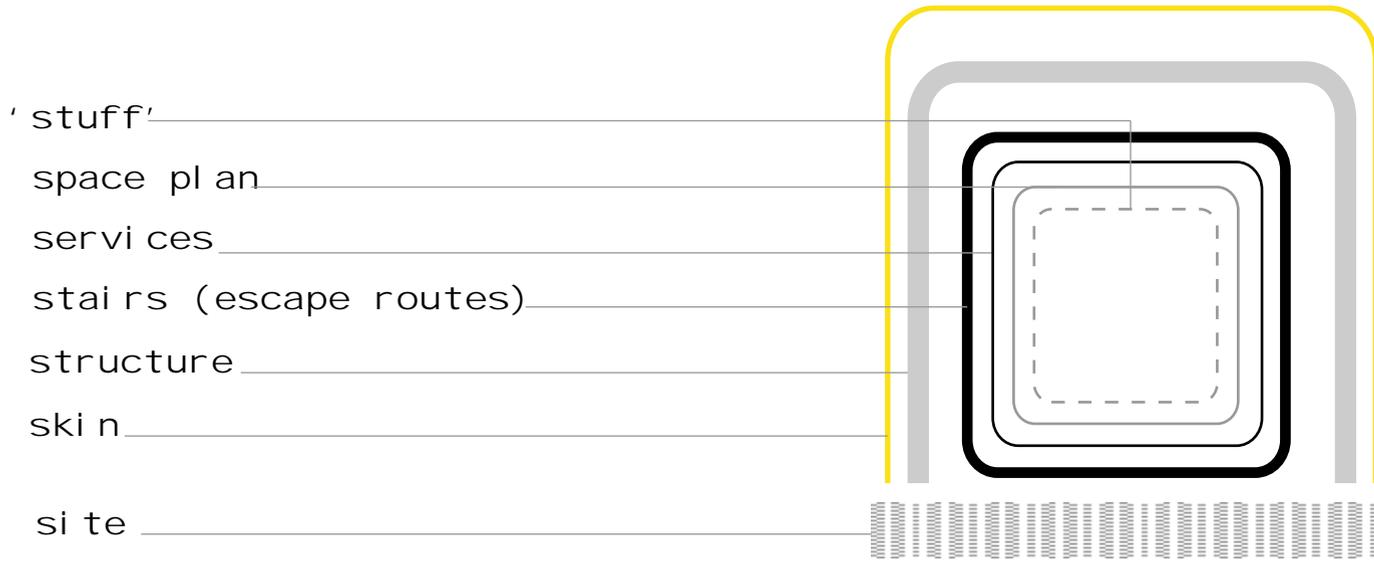


fig 3.33 Building layers of change.

"The contemporary designer's role, rather than creating a fixed setting for people's lives, can now be perceived as a sort of **facilitator for the building user to create their own place** that they can change as frequently as they wish. Instead of a fixed symbol of the taste and aspirations of the owner, the architecture becomes an indicator, though no more than that, of the meaning of the life and work that exists inside and also its possibilities for their future. Architecture still provides settings for the theatre of human existence. but these settings may now, if desired, be as variable as the occupants' moods or alternatively a fixed element in the changing pattern of living and working. **Some changes may take place instantly ... others may happen over months, years or even decades, depending on the changing nature and activities of the building's users**" (Kronenburg 2007: 109).



Flexible buildings respond to changing environments in terms of their use, operation or location. "It is a design form that is, by its very essence, cross-disciplinary and multi-functional; consequently it is frequently innovative and expressive of contemporary design issues" (Kronenburg 2007: 11).

The capacity to accommodate change could be one of the most important factors in economic and sustainability terms, but, according to Martin Heidegger, buildings have a more critical purpose, the act of 'Placemaking'. The object (building) is secondary to its existence within a place.

The act of placemaking can be permanent or it can be temporary. Placemaking as an event can be temporary, as used by many non-Western societies. It can be a ritual within the landscape or even consist of a memory. It could be architecture as an installation, lightly placed on the city surface, where it "interacts with the surrounding landscape in a less formal sense and **becomes an event rather than an object**" (Kronenburg 2007: 12).

One of the key principles in the generation of flexible architecture is that it only becomes complete once people inhabit and use the building. This does not mean that we now need to design loose-fitting, bland environments. Instead we should aim to design buildings that have integrated systems that can accommodate change. It has to communicate effortlessly to its user and offer opportunities to engage with events by providing meaningful settings that evolve over time.

"Through change driving its development, it must still respond in a balanced way to the constant theatres in which human activity take place – in our private and public lives, at home and in the community – each of which contributes to our sense of how we dwell in the world" (Kronenburg 2007: 19).

According to Robert Kronenburg, four characteristics define a flexible building. These are:

1. ADAPT
2. TRANSFORM
3. MOVE
4. INTERACT



fig 3.34 (above) Street entrance.
fig 3.35 (bottom) Ramped staircase.

Toyo Ito, 2004

Matsumoto performing arts centre,
Tokyo



Matsumoto's program includes two theatres, rehearsal spaces, studios, workshops and a restaurant. The main objective was to create a building that could be adapted by its users and visitors, and that the building would be capable to respond to their changing and developing needs (Kronenburg 2007: 84). The resultant building is specific to its site and program, and it manages to communicate its adaptability to its users in a clear and direct manner, so that the user can understand it and develop it even further.

The long and thin site is within a nondescript area, with only minimal street presence. The building had the difficult task to establish a civic presence within its surrounding area. What made the design even more difficult was the fact that the site layout did not allow for the normal hierarchical layout of other theatre buildings. The entrance and back of house had to be placed together.

The designers placed the minor theatre and rehearsal rooms at the front of the building, acting as a buffer for the main theatre at the centre. A curved wall is used to encircle all public spaces in an organic form. Visitors are quickly swept from street level to the upper level by a large ramped staircase and escalator along this wall. The visitor travels through a gradually opening linear volume. The curved wall is constructed from glass-reinforced concrete panels with inlaid

recycled glass blocks that let diffused natural light into the soft, amorphous and smooth interior.

The principles of flexibility are addressed in four ways:

Transformable elements allow spaces to be used for more than just one function. Ceilings can be lowered to give different acoustic conditions and spatial experiences. Stages can be extended, seating can be removed and the user has control over the amount of natural lighting. The building's floor surface provides for **movable elements**, different mobile components that can be located to organize and re-organize space or routes. **Adaptable spaces** express no particular function, but suggest many. Spaces are **CROSS-programmed** and different functions merge into one space. This is the space where events can happen; the 'in-between'. Visitors interact with artists in circulation areas, making public areas inviting and accessible.

"The building design actively encourages people to come in and see what is happening and then to use it in many different ways" (Kronenburg 2007: 87).



1. adapt

Building frameworks that are designed to respond to different functions, patterns of use and users. Loose-fit space is used that can be fitted out as required by different participants. The building is not viewed as a fixed object, but as a process.

Adaptable architecture allows for the easy application of new technologies, for example by using a conduit or access flooring system. The plan therefore allows for different layouts, has fewer restrictions and allows the user to influence design decisions.

Service cores or 'control systems' that can service subdivided and re-zoned adaptable spaces over time must be sophisticated to allow for ease of use. They usually contain the lighting control system, power supply and communication systems. These service cores can be complex and expensive, but they are able to accommodate both rapid and long-term change.

The only drawback is that adaptable spaces cannot

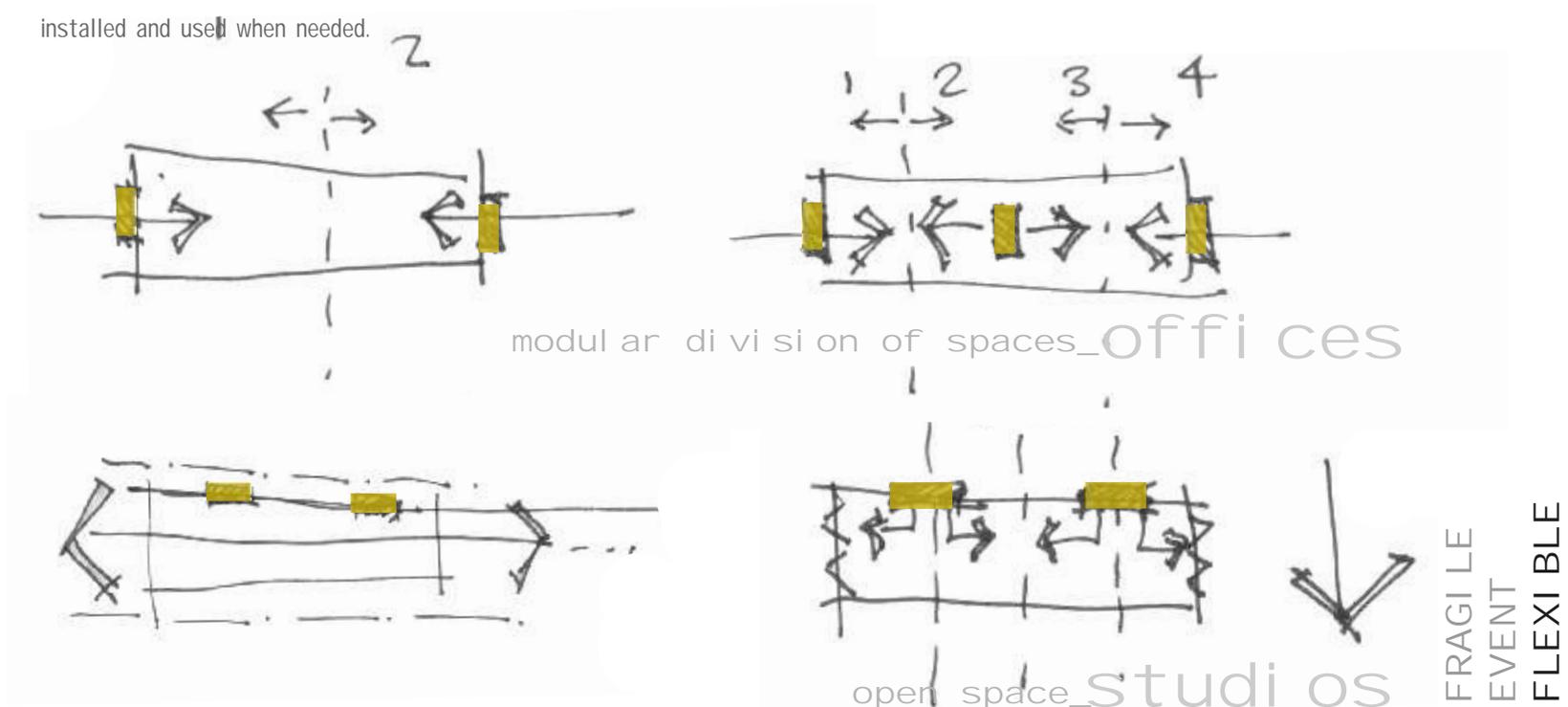
The only drawback is that adaptable spaces cannot accommodate a close fit for specific dedicated functions. Compromise may be necessary. Fluctuating space is thus applied, in which these dedicated spaces are linked with buffer zones that allow for the unplanned activities to spill out onto if required. These cross-programmed fluctuating spaces are most often the circulation areas and lobbies within a building. The fluctuating space becomes the 'in-between'; the event space.

adapt

proposed design implementation:

Because the proposed building has to support many diverse uses and users, the access to service points has to be legible. Throughout the building the easily accessible service cores are located at easily identifiable areas. These cores vertically distribute the necessary services. A low profile access flooring system is used to distribute electrical services horizontally. This ensures that new technologies can easily be installed and used when needed.

These service cores are located at the center of the building, making the plan layout as flexible as possible. This flexibility allows users to reconfigure their spaces according to their own individual needs.

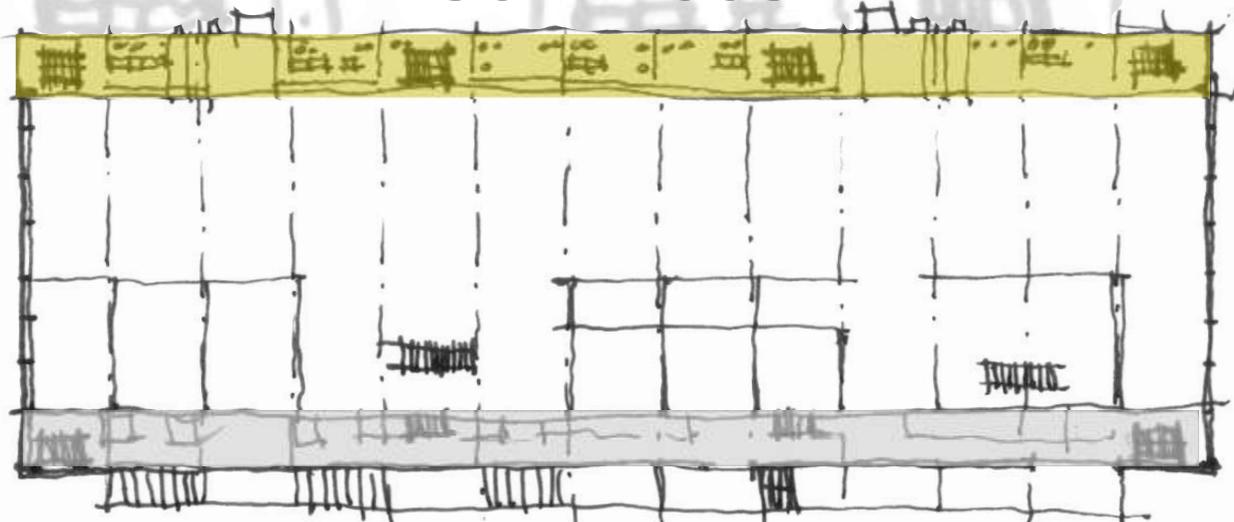


FRAGILE
EVENT
FLEXIBLE

fig 3.37 Investigation sketches of service core layouts.



services



movement and services

fig 3.38 Modular plan layout.

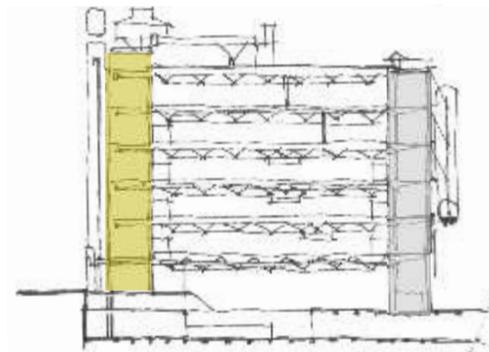


fig 3.39 Section.

Renzo Piano and Richard Rogers, 1977.

Pompidou Centre, Paris



The Pompidou's original brief was to provide a 'Cultural Centre for Paris', a museum of modern art, a reference library, a centre for industrial design and a centre for music and acoustic research. The architects expanded the brief to a 'Live Centre of Information and Entertainment' with the aim to design not only for the art specialist, but to include the visitor, local resident and tourist.

They created "a truly dynamic meeting place where activities would overlap in flexible, well-served spaces, a people's centre, a university of the street reflecting the constant changing needs of users" (Kronenburg 2007: 69). It was to express change and be practical at the same time.

The building and its new open spaces had a great effect on its urban environment, acting as a catalyst and regenerating its surrounding area. It changed the neglected area into a desirable and vibrant community.

The flexible layout of the building was a key concept. Services and access routes were incorporated around its perimeter, communicating its flexibility to outsiders. The resultant internal open floor area or 'plated' could be re-arranged in any way, allowing for multiple functions. Internally there was a hierarchy of flexibility. Small, light-weight partitions allowed for instant change while larger museum partitions could be

moved within an hour. Even firewalls were bolted in place to allow for longer-term change. The services also allowed for a great degree of flexibility, being located at floor and ceiling levels.

Pompidou centre: "showed how modern technology could offer ways of integrating a huge gallery into the heart of an ancient city, at the same time, enhancing the life of both." (Evans 2001: 250)



2. transform

Buildings that change shape, space, form or appearance by the physical alteration of their structure, skin or internal surfaces. It is architecture that is altered by opening, closing, expanding and contracting, dramatically changing the appearance and ambience of a space.

Problems that usually need to be addressed are: moving mechanisms, the joining of internal and external surfaces, and the operation of services under the different conditions. Mechanisms should be easily operable, reliable and robust.

Transformable buildings give the user more control over

Transformable buildings give the user more control over his/her environment and enhance the connection between the building and the external environment. It changes the human engagement with architecture, where the building becomes a dynamic object that people can interact with directly. It also makes the transformation of a building's image and identity possible, depending on the nature of activities inside.



proposed design implementation:

By applying a mediamesh/illumesh, images can be projected onto the screens, thereby changing the outer skin from a static medium into a dynamic façade, thereby activating the public space.

With the installation of a dynamic medium it becomes necessary to design it not only as a one-off event, but to organize and design its ongoing program.

The presentation must be an ongoing artistic program, implemented and curated by the organization.

Technical aspects of these screens are discussed in the technical investigation.



fig 3.40 Mediamesh screen.

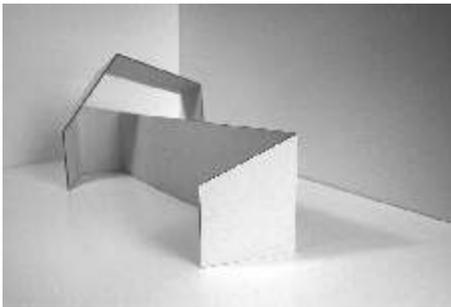


fig 3. 41 Model of the transformabl e whi te cube.

Pleinmuseum is a mobile exhibition pavilion. Constructed of steel tubes and canvas, a hydraulic mechanism unfolds the structure and transforms it from a white cube into an illuminated sculpture. Its white walls become projection screens that absorb colours and lights of a show, continually taking on new appearances.

Rene van Engelenburg, designer and initiator, aims to illustrate issues about the changes within the international artworld. This 'migrating museum' is an alternative to the 'white cube' view of the standard exhibition space. As a representation of the model of the modernist museum the structure remains closed during the day. But at sunset it becomes an open and flexible museum that is easily approachable (pleinmuseum.org).

Pleinmuseum becomes part of urban life, activating public space. It reconfigures the relationship between art and the public. It is an accessible tool for artists across a variety of disciplines that invites the audience to participate in events.

This temporary stage becomes a dynamic platform for discussions on the new emerging means of visual representations within the accelerated globalized culture.

Rene van Engel enburg, 2005.
Pl ei nmuseum

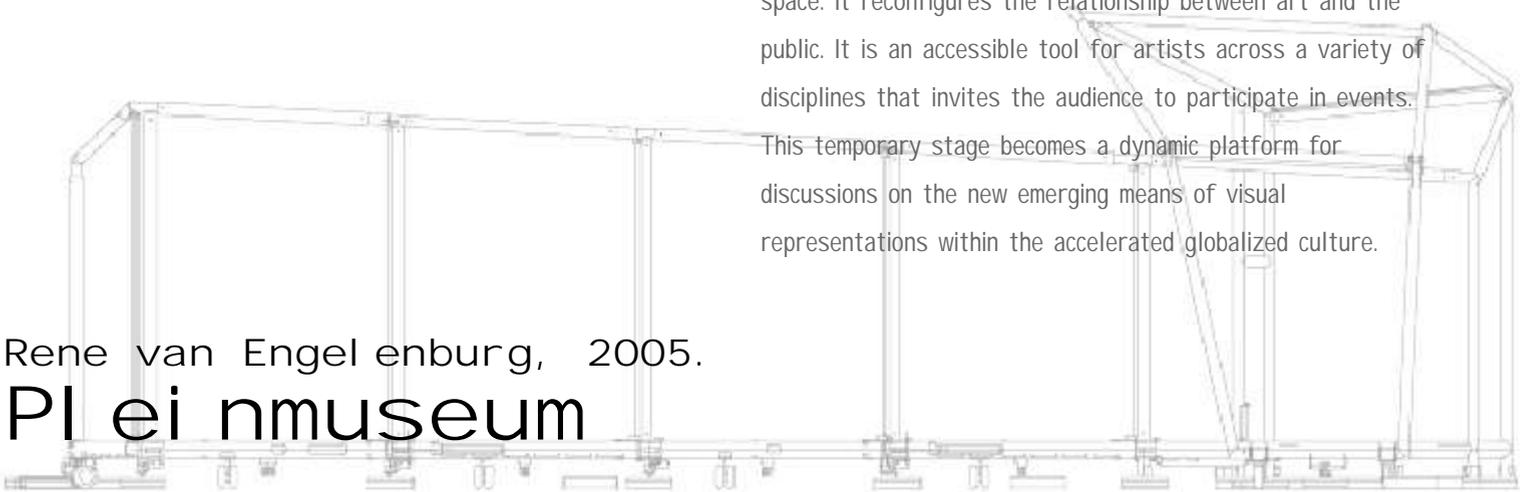


fig 3. 42 El evati on.



fig 3. 43 The 'chamel eon' museum.



3. move

Buildings, usually prefabricated, that relocate from place to place in order to fulfil their functions better.

Movable buildings can be portable, demountable and modular. These temporary buildings can be used to change the nature of public spaces.



move

proposed design implementation:

The proposed building is not a movable building, but a permanent structure. However, movable elements are implemented in the design that contribute to the flexible nature of the design.



fig 3. 44 Movable screen elements.

A sliding screen system is applied to the eastern and western facades. Their main function is to protect the interior space from the direct morning and afternoon sun. These screens can be opened and closed according to the users' required level of light and level of privacy. Screens can be opened to expose activities inside up to the outside, inviting the spectator, or they can create private working spaces. By using a buffering zone, additional outdoor space is created, which also functions as the in-between event space.

Elements within spaces can be moved in order to change the nature of the space. Sliding doors allow open spaces to be sub-divided. The sliding doors can even be used as exhibition panels. These elements support the cross-programming function of the spaces.



This is an installation

(which poses questions):

What is the programme?

Programme =

Spaces

for architectural exhibition (of images)?

and/or

Programme =

Spaces

where architecture (a tectonic argument) is exhibited?

and/or

Programme =

An architectural framework
that exhibits spaces?

This is an installation

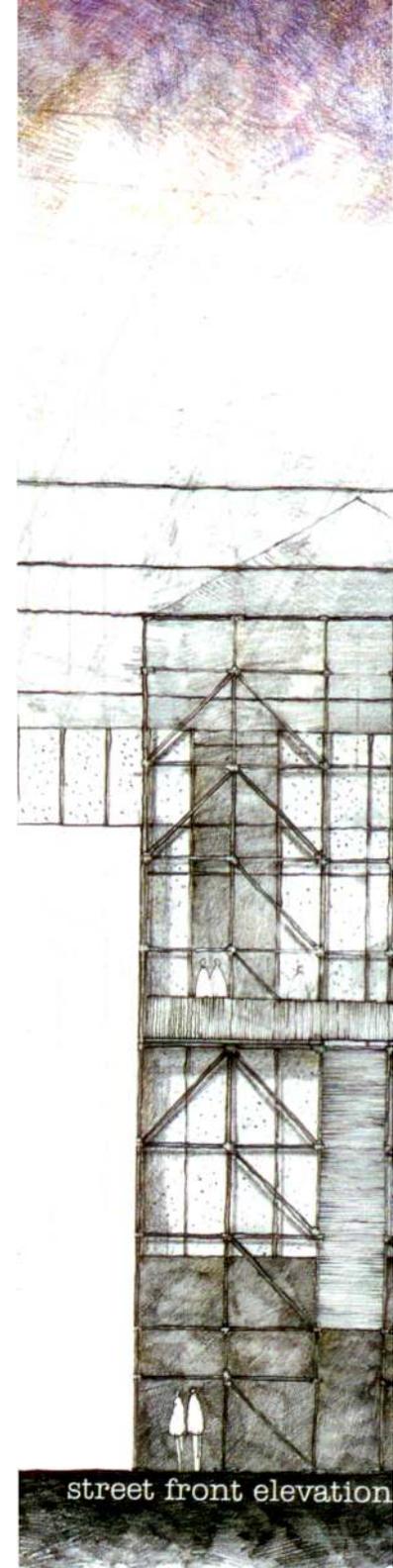
where real and perceived tectonics
may collide

or, at least, co-exist

This is an installation.

D. Kiratzi di s and A. Hofmeyer

UrbanPlayMobiLe



street front elevation

This was the winning project of the UrbanPlayMobile Design Competition, launched in February 2006. The aim of the competition was to create a vehicle to promote urban culture, and to invent a new use and demand for public space.

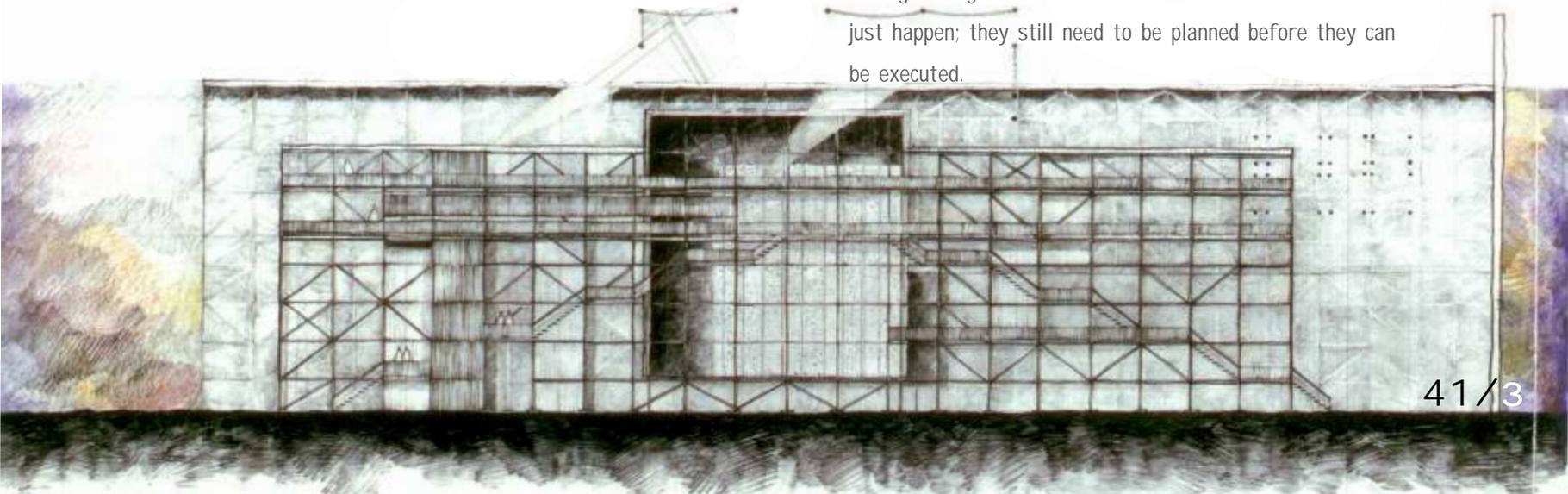
This design is an example of flexible/mobile architecture as an event generator. The primary framework consisted of scaffolding that would be attached to existing buildings. It would be a cultural exhibition space that would bring new life into public spaces within cities, provide fun and entertainment, and act as a platform for education. Most importantly, it would change the perceptions that users have of their neglected urban spaces.

fig 3. 45 (left) Program investigation.
fig 3. 46 (below) Elevation sketches.

The proposal consisted of a modular framework that is site-specific and has minimal impact on its environment. The scaffolding skeleton would provide the structure onto which prefabricated concrete panels could be fixed. Alternatively, taken a step further, it could provide a backdrop for images projected onto attachable canvas screens. From a 'non-space', this placemaking tool could be used to generate events and activate space. The possibilities are almost endless.

A scaled-down version of the proposal came to fulfilment in May 2007 at the historic Drill Hall, Johannesburg. Unfortunately, the lack of funding resulted in the project being revised extensively. But it still achieved its aim by activating its surrounding public space.

What became apparent is that the project required a strong driving force behind it to be realized. Events do not just happen; they still need to be planned before they can be executed.





4. i n t e r a c t

Buildings that respond to users' requirements by using intelligent systems.

These buildings' systems react to environmental comfort, safety, security, privacy, communication, entertainment, ambience, energy-use and efficiency. These systems react to users' requirements in automatic or intuitive ways. These systems can be highly technological, or just uncomplicated *brise-soleil* systems. They communicate to the outside world and show that architecture is active.

It is important that visual interactive systems truly function as interactive elements. Viewers should have a degree of control over their visual environment. If the building is not interactive, it becomes a continuation of the "pre-determined architectural forms of the past" (Kronenburg 2007: 214).

i n t e r a c t



proposed design implementation:



fig 3. 47 SPOTS, Potsdamer Platz, Berlin.

Art interventions on the public square will contribute to a positive and creative atmosphere, and will invite people to participate and congregate in the space. There must be a balance between individual artists' work, commercial advertising and the public's desire for a democratic public space. The public should not be 'bombarded' by an individual or a small group's aspirations.

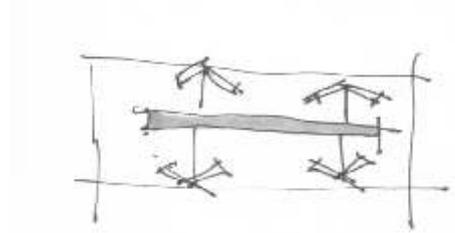
The screens on the façade are thus fragmented into smaller screen elements. These separate screens can function in isolation, or they form part of a larger image; as pixels forming a whole image.

The SPOTS installation for the Kunsthaus Graz, makes use of a Monday system. Throughout the week artistic shows are presented, and Mondays are set aside for advertisements. The income generated from advertising is used to finance the artistic work (realities:united).

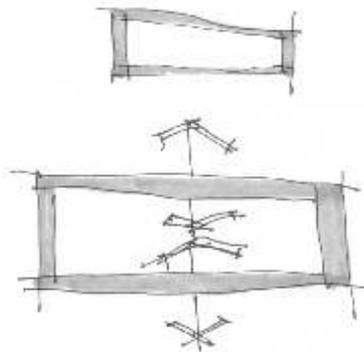
Viewer participation is encouraged in the design. It is proposed that a cellphone system be implemented, whereby viewers can have personalised messages or images displayed on the screen.



CORE



SKIN



MVRDV proposal , New York, 2001-2002.
Media Galaxy



Founded by John Johnson in 1997, Eyebeam is a hybrid non-profit organization that offers educational programs, media production facilities, exhibitions and performances. Their mission is to support the research, production and distribution of the new media arts. Residency programs enable the public to interact with the participating artists.

In 2000 a competition was launched for the design of their new building. The Eyebeam building will house a museum of art and technology, artist-in-residence studios, an education centre, multi-media classrooms, a theatre and a digital archive. MVRDV was one of the finalists in the competition with their 'Media Galaxy' proposal.

MVRDV's proposal compared concepts of media and architecture. "Media and Architecture form a contrasting combination: quicksilver versus inertia, melting pot versus traditionalism. However both deal with 'space,' imitating or mimicking new media does not seem the direction for architecture: no project ages faster than an 'ultra-modern' media based architectural image. A practical approach seems more rewarding" (MVRDV 2005: 794).

With the introduction of computers in the workspace the traditional office space layout had to be re-thought. The traditional office layout consists of a central distribution core with office spaces on the perimeter, resulting in shady and flickering zones. But by reversing the plan, central work spaces are created, surrounded by stairs and walkways. This results in "an open shady plan surrounded by a 'communication wrap': an accessible skin" (MVRDV 2005: 795). It forms a 'hollow beam' with an external double skin that houses all communications, services and the structure. Interior voids become important collective zones: "an endless interior, in which all functions can be addressed" (MVRDV 2005: 796).

By placing the 'hollow beams' in the hollow tower, the combined 'in-between' spaces become open communicative environments. They are the meeting spaces that provide spaces for different users and programs.

fig 3.50 Media Galaxy plan layout sketches.



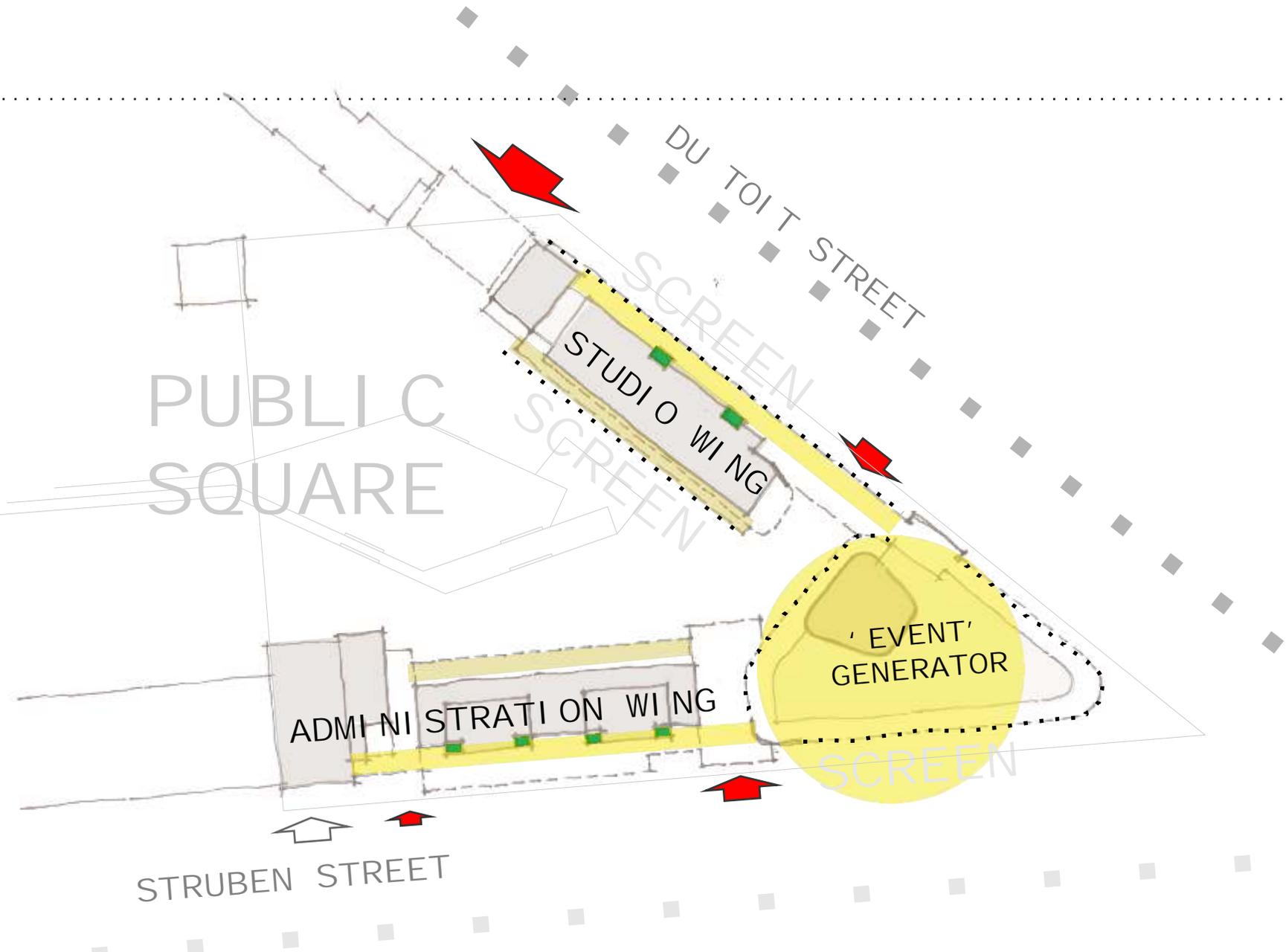
UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

.....T H E D E S I G N

chapter 04



This is the new cultural hub in Pretoria. It supports multiple functions and it is activated by the buildings along the edges. It is a place of the potential meeting, a resting place or the event space. It is a stage of everyday life, with the city acting as its backdrop.

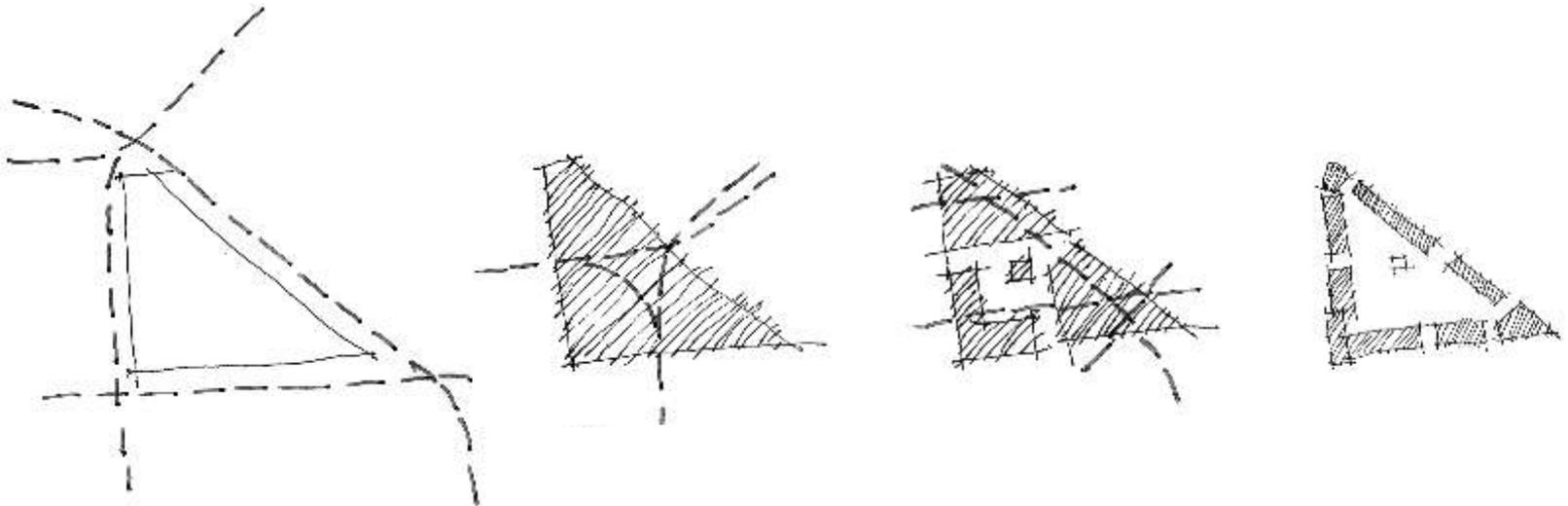
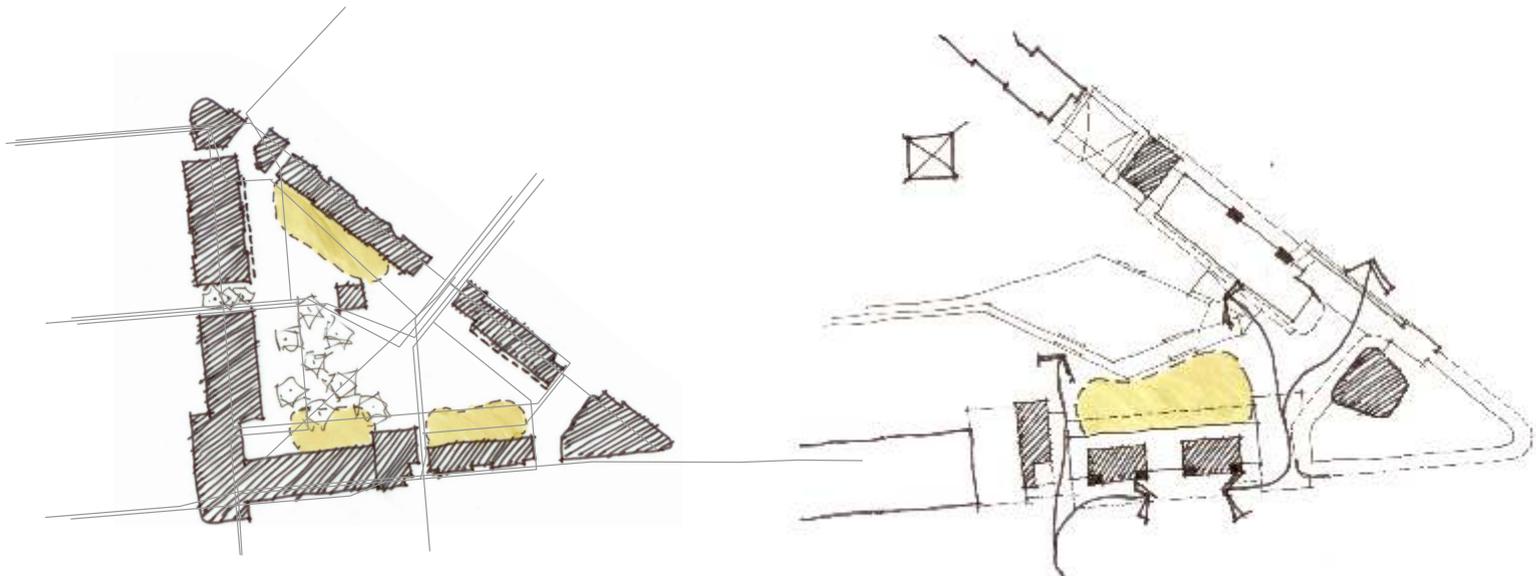


fig 4.2 Movement patterns shaping the square.





1. the square:

Public activities on the ground floor of the buildings spill over on to the square. Activities in a public place naturally form along the edges (Alexander 1977: 600). These edges are formed by the three proposed designs and together they form a continuous edge, punctured only by the pedestrian paths leading into the square.

Restaurants occupy the southern and northern edges, shops on the western edge bring commercial activities to the square, while the workshop areas on the eastern edge act as 'stages' for different events. The square is activated by the movement of people through the space, by the unpredictable activities within the square and by the use of digital screens on the building façades.

The entrance from the basement is through a centrally placed circulation tower, which also acts as an air-inlet for the basement. The tower is the focal point of the square and is placed in a position that is visible from all access points into the square, thus drawing people towards the center.

The stairs and ramps divide the square into a hierarchy of smaller areas, each with their own identity, making the spaces legible. These stairs also function as seating areas, from where activities in the square and in the buildings can be viewed. People naturally gravitate towards raised and easily accessible areas in public places (Alexander 1977, 604).

Different materials and textures are used to mark routes and thresholds. Brick is used to mark quieter areas, giving it a soft and inviting appearance.

All the activities on the square promote a safe, 24 hour environment.





Lab architecture studio and Bartes Smart, 2002.

Federation Square, Melbourne

Federation square is the new civic square in Melbourne. The project consists of nine cultural and commercial buildings, covering a whole city block

This project has a number of similarities with the proposed design. Both define a city edge while connecting the river area with the city; both projects form a gateway and both create new civic spaces within the historical city fabric.

At Federation square this was achieved by providing open public spaces and permeable buildings along the edges. These buildings support the square by providing lively programs. "Federation Square, now built, has healed some of the urban wounds of modernity. It has re-covered a ground and folded it back into the city, with a high-culture mall." (Crist 2003: 1).

A finer grid system that was applied over the existing street grid. By reflecting the new triangular pinwheel grid on the building facades, the grid binds the different buildings together and forms a visual coherence.

The design's geometry supports various configurations and uses. During the day the square acts as a series of individual outdoor spaces. During the night the individual cafe and restaurant spaces are compounded and become a large public festival space. The square becomes an outdoor amphitheatre, underneath a network of lights.

"Federation Square is a contextualist building in that it not only has a familiar scale, and achieves some interesting connections with its context, but it also seeks to imitate the experiential parameters of Melbourne's nineteenth-century structure of streets and lanes" (MacArthur 2003:1).



fig 4.5 The experiential qualities of interior spaces.

Federation square is a system of patterns and forms. The non-classical geometries of the facades have a high degree of complexity, blurring edges between the buildings and the city. The aim of the architects was to devise a language of form, but unlike Modernists buildings, these forms manage to remain vague and indefinite (MacArthur 2003:1).

Unfortunately the design “stops short of rethinking the idea of the free facade and 'thickening of the wall' beyond the architectonics of the decorated-shed” (Hartoonian 2003:1). Instead of designing the façade as a skin that covers the architectural body, it has a 'dressed-up' quality; “it operates like a mask that has nothing to do with all that is behind it” (Hartoonian 2003:1).





Federation Square has two art galleries; the Ian Potter Centre: NGV Australia and the Australian Centre for the Moving Image.

The Ian Potter Centre's brief to the architects highlighted the need for flexible gallery spaces. These gallery spaces should be able to contain Australian Indigenous, colonial and contemporary art, as well as temporary exhibitions. Lab and Bates Smart approached the concept of a 'white cube' gallery with a new perspective.

Movement routes through the spaces form an important aspect in the design, becoming part of the building's internal drama. Large rectangular galleries are connected by a series of walkways that span the interior voids between the galleries. These corridors allow a direct chronological route through the building, but because the routes always lead back towards the centre, different routes can be followed. This allows each user to create their own frame of reference.

As the visitor progresses through the different gallery zones, entrance points into the spaces stretch and perforate the white cube.

“This is an architecture that encourages the viewer to establish personal perceptual and conceptual connections with the art – reinforcing the context created within each gallery, and in some places between and across galleries and through internal windows, or beyond to the city glimpsed outside”
(Stanhope 2003:1).

The large rectangular galleries are sub-divided into smaller areas by partition walls below the ceiling height. These elements provide flexibility, but need to be reconstructed with each new exhibition and thus have an impermanent appearance. However, the responsibility to create dynamic exhibitions and new engagements now lie with the gallery's curators and exhibition designers, and ultimately with the user (Stanhope 2003:1).



ground

basement
entrance
tower

1.

10.

workshops

5.

pedestrian
arcade

restaurants

2.

vendors

basement
entrance

pedestrian
arcade

pedestrian
arcade

4.

THE CORE



2. restaurants & vendors:

The restaurants that spill out onto the more quiet areas of the square can be entered from the sidewalk or from the square. From there, people can observe the events in the square. Deliveries to the restaurants must be scheduled to occur early in the morning from Struben Street, as not to disrupt the movement of pedestrians.

Passing pedestrians are catered for by the small informal stalls on the sidewalk. Throughout the area these informal stalls sell anything from cooldrinks, sweets, clothes, music, etc. Storage is provided, allowing vendors to safely leave their wares there overnight. These vendors provide a level of control over the sidewalk and offer an important security observation point.

3. sidewalks:

The covered edges of a building play a vital role in the way people interact with the building (Alexander 1977: 581) and they provide the gradual threshold between inside and outside.

Along the eastern wing, next to the public workshop area, pedestrians moving along the sidewalks walk through a colonnade shaped by the cantilevered walkways above. Pedestrians are made aware of the movements and events in the building. Shaded seating and resting areas are provided along this edge, serving as a spill-over waiting area for the tram stop. The beautiful London Plane trees provide an enjoyable street environment. A concrete ramp leads pedestrians to the main entrance of the building. Alternatively pedestrians follow the route between the core building and the community hall towards the southern wing.

The corner building has a rounded corner with a cantilever, which resembles the bazaar-era corner shops in Pretoria. The building edge can be opened up, letting the café and exhibitions spill out on to the corner. These activities will activate the currently dead and unused public space.



first





4. the core:

The main entrance is placed at a point that is immediately visible from the various access routes. The bold and visible shape draws visitors to the building. Here all circulation routes merge into an un-programmed 'event' space.

The main entrance and information desk on the ground floor level are easily accessible from all directions. The café area is a cross-programmed space that can be utilized for various functions and exhibitions. The concrete walkways cantilever over this central space, expressing a sense of fluidity and movement. From there the activities and 'events' in the building can be observed, giving the spaces a theatrical feeling.

At night the building becomes translucent, hinting at the activities inside and drawing visitors to the building and the square.

5. workshop area:

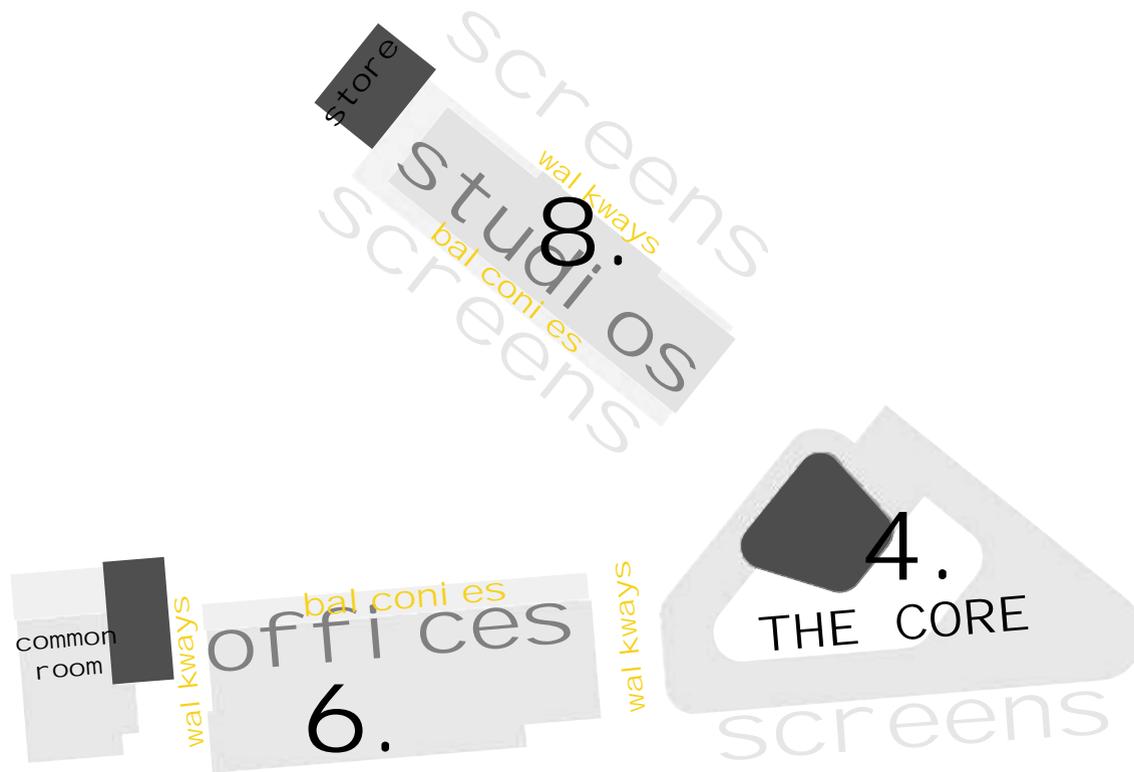
The workshop area and multi-purpose hall can be used together or separately. Access to the multipurpose hall is from the internal pedestrian route, next to the main entrance to the building. It is thus easily accessible from the street and the main building, and it is located in close proximity to the public facilities.

The workshop area can be accessed through the multi-purpose hall or alternatively from the sidewalk and the square underneath cantilevered walkways and balconies. The area can also be accessed from the secondary entrance and circulation route to the north, where the store rooms are located. The service cores are easily accessible from the multi-purpose hall and the workshop area, thus providing a flexible layout allowing for different functions.

The stairs from the square are pulled through to the workshop space, providing an informal seating and street theatre area. When the tip-up glazed doors along the edge are open, activities in the inside spaces spill out onto the public space. The boundaries between inside and outside are thus blurred, providing a continuous surface.



second





6. office areas:

The office areas provide the administration space for the organization. The central service cores allow the open plan spaces to be easily re-configured and sub-divided. The space can thus contract and expand according to the organization's current needs.

The remaining office space is rented out to other creative industries businesses. These work together and strengthen each other in the creative environment. Income generated from the rented office spaces will be used to support the artists.

The office areas can be accessed by the public from the main circulation space at the corner and a more private entrance is provided at the western side, which also serves as a fire escape route. Wide corridors and the balconies act as meeting points, while the narrow corridors that connect the offices to the common rooms allow for more intimate encounters. All edges blur the boundaries between inside and outside.

7. visual material centre:

The visual material centre provides a flexible computer workroom and library area. Within our technological age, all information can be accessed over the internet, diminishing the need for large library spaces.

In this area visitors can access the global network of information, while other visitors sit and flip through magazines for inspiration. Small group meetings are accommodated for in the meeting rooms. Desks also act as mobile workstations for visitors.

_media theatre:

Films and electronic presentations play an ever increasing role in the contemporary art world. The small screening room is available for the presentations of digital media by resident artists. It can also be used for lectures and it is rentable for private use. The screening room is located close to the main circulation core of the building. It has 64 built-in seats and provides for people with disabilities. The shape is easily distinguishable in the building mass, cantilevering over the community hall entrance.



third





8. studio spaces:

Robust services are provided in order to create an inspirational and flexible work environments. These are highly interactive areas, where residential artists constantly switch between individual and collaborative environments.

Interior spaces can easily be reconfigured so that larger groups can be accommodated, while artists next-door personalize individual spaces. A sliding door system facilitates the sub-division of spaces. These doors also provide surfaces for exhibitions and projections. Suspended ceilings are fixed at different heights, thus shaping and lending certain characteristics to various spaces within the larger spaces.

Artists are thus able to insert and adapt a second skin within the larger spaces.

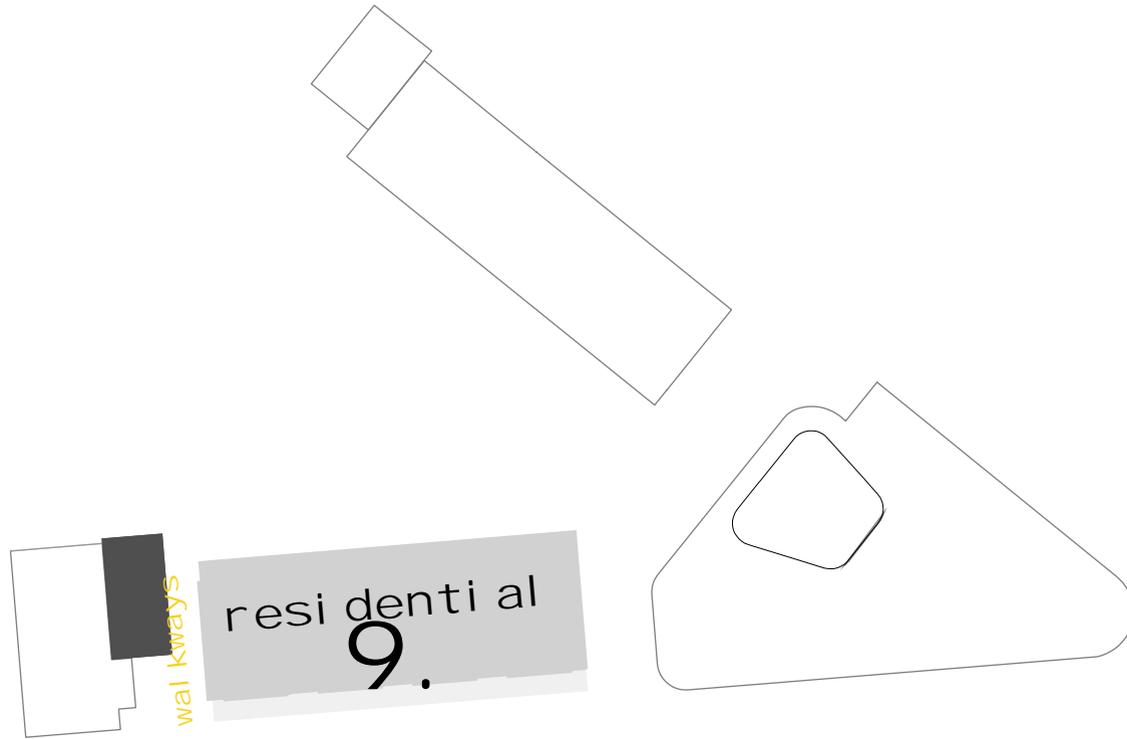
9. residential component:

Seventeen new flats provide housing for the students within the area. Sixteen flats are one-bedroom units and one is a double-bedroom unit. The flats all face north, ensuring adequate natural light and a comfortable indoor environment, while the flats' dimensions and layouts allow for natural ventilation.

The residential compartments cantilever over the restaurant areas and the office balconies, ensuring the residents' privacy. Balustrade walls and screens provide further privacy, but still allow views over the square, thus establishing passive observation.



fourth





10. tram stop and ticket sales:

The tram ticket sales office functions independently of the main building. It is located at the main entrance to the square from the east and also serves as a security point. Ticket vending machines issue tram tickets and an office space is provided for the attendant.

The ATM machine is located on the side of the busy Du Toit Street, next to the secondary building entrance. This ensures that it is a secure area and not hidden away in a quiet corner.

11. basement:

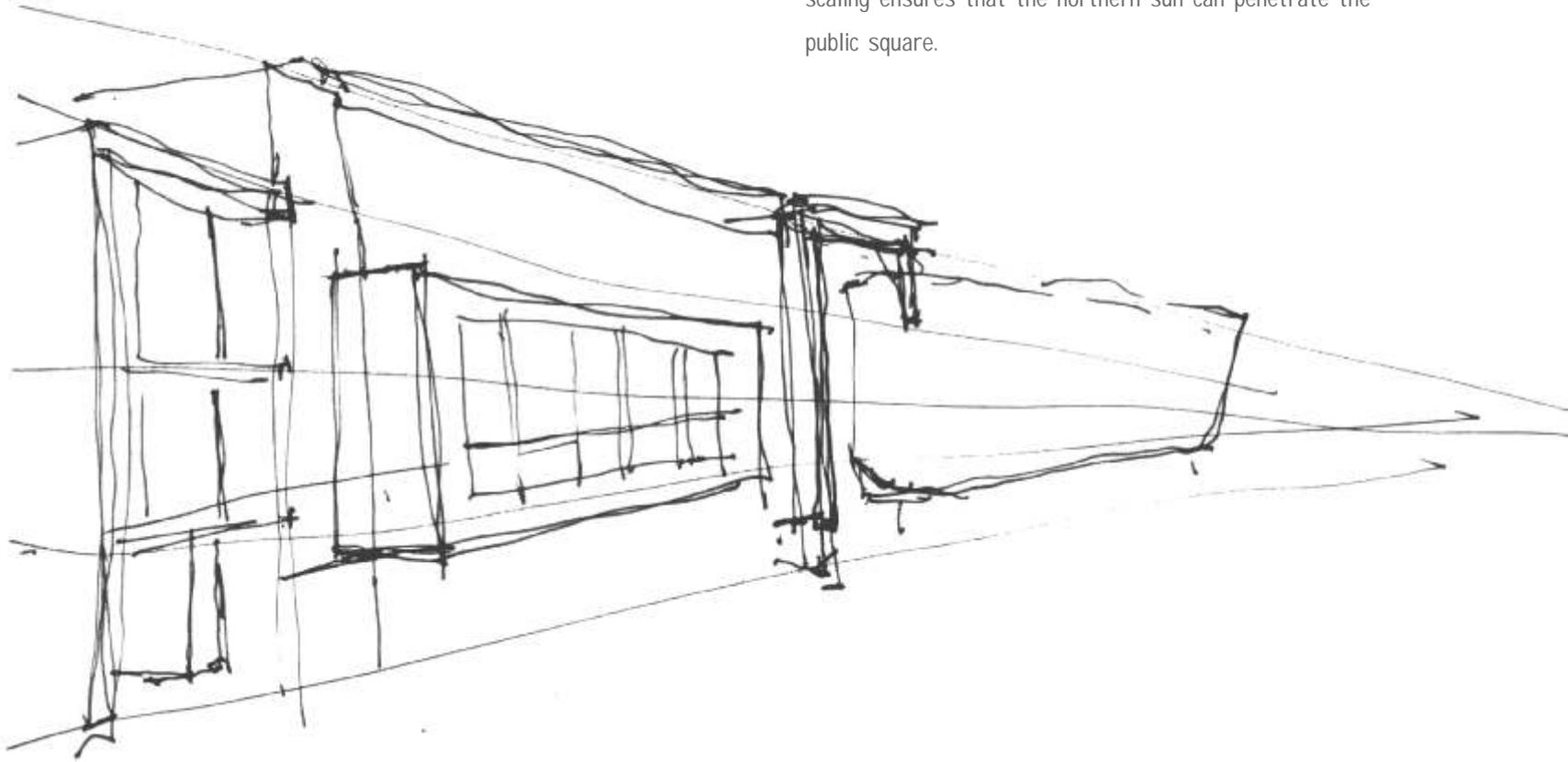
The new basement will provide public and private parking facilities. The basement is shared with the other two proposed projects on the site (see page 16/1). Management of the basement is thus divided into three areas.

From an interview with a civil engineer (K. Vermooten, 13 June 2007) Struben Street was chosen as the access side into the basement. The quiet nature of Struben Street, and the fact that it is a one-way street, will ensure the ease of access and exit of visitors. The proposed design requires 46 secure parking facilities (appendix_02), leaving 76 parking spaces rentable to the public. The basement also provides spaces for storage, workrooms and plantrooms.



12. scale:

The scale of the building clusters reflects the reduction of the city scale from the centre towards the lower scale of the TUT Arts Campus and the Apies river. The Southern wing is thus at a level higher than the eastern wing. This scaling ensures that the northern sun can penetrate the public square.



13. elevations:

The corner articulation is an important concept throughout the proposed design. Its visual prominence on the street intersection is emphasized by the design. An Illumesh screen provides an active skin for the organic concrete walkways structure at the main circulation core. The screen provides sun protection for the eastern façade. Its transparent nature allows passers-by a glimpse into the current art world. Alternatively the digital nature of screen is used to project digital artworks and advertisements.

The southern wing has a formal and 'heavy' character, but the use of tactile surfaces and recessed balconies and cantilevers lend it a fragile appearance. The variety of window types creates rhythm on the façade and expresses the building uses. The set-back of the upper level on the southern side breaks the verticality and defines the top of the building. On the northern side the cantilevered residential component ensures privacy for the residents and shapes the public space beneath it, protecting that area from external elements. Vertical concrete fins add rhythm to the façade and articulate the balcony spaces.

The 'light' and transparent character of the eastern wing is articulated by the application of a variety of sun screens and the use of the double skin construction. Throughout the design the incorporation of awnings and cantilevers creates a human scale to the building.

Pedestrian gateways into the square and circulation cores in the building are articulated through the use of different materials, colours and the built form. The building communicates its dynamic functions and flexibility as an 'event' space to its users, increasing occupant awareness and ease of use.

The facades are designed with the appropriate scale, rhythm and proportion that respond to the local character and reflect the environmental conditions. It is not a free-standing object in the city, but the proposed design forms part of the city fabric.





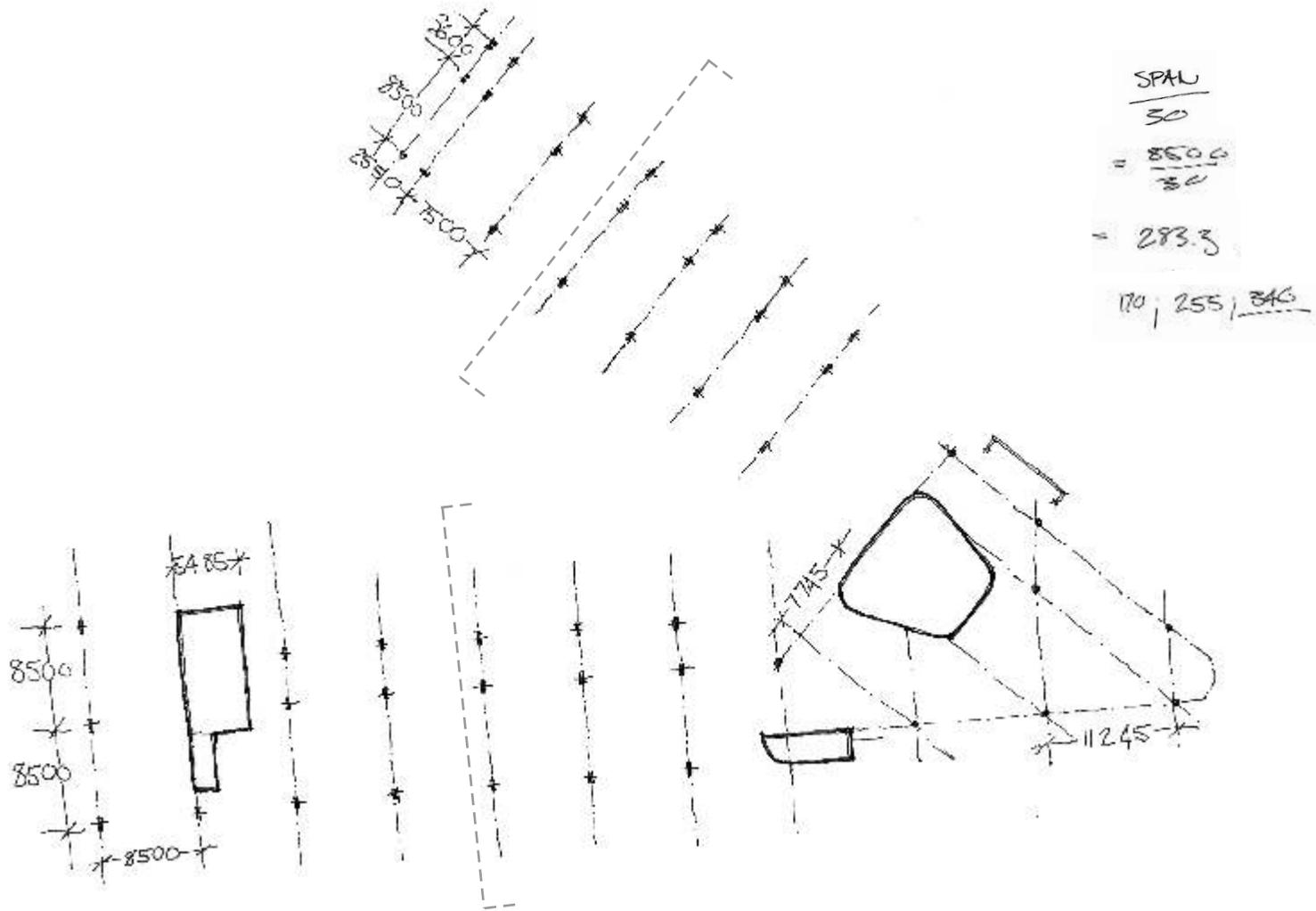
fig 4.13 South elevation on Struben Street.



.....TECHNICAL DEVELOPMENT.....

chapter 05

5. 1 THE STRUCTURE	[02]
5. 2 MATERI ALS	[08]
5. 3 CI RCULATI ON	[14]
5. 4 CLI MATE CONTROL	[16]
5. 5 ACOUSTI CS	[18]



5. 1 _ THE STRUCTURE

The proposed design uses a robust reinforced cast in-situ beam and slab structure. The design follows the basement grid of 8 500 x 8 500 in the southern wing and on the eastern edge the grid is 7500 x 8500.

From the interview with the structural engineer, off-shutter reinforced concrete columns on the ground floor are to be 330 x 850 in size. The large size is due to the column shape. The large size also allows for the cast-in galvanized steel rainwater pipes. From the third floor and up the interior column sizes decrease to 330 x 680.

The chamfered corners of the columns protect the edges and add to the visual complexity of the building.

The one-way 340mm deep reinforced concrete slabs span 8,5m supported by 340mm deep reinforced concrete beams.

Other load-bearing elements in the structure are to be constructed of load-bearing brick and cast in-situ concrete walls.

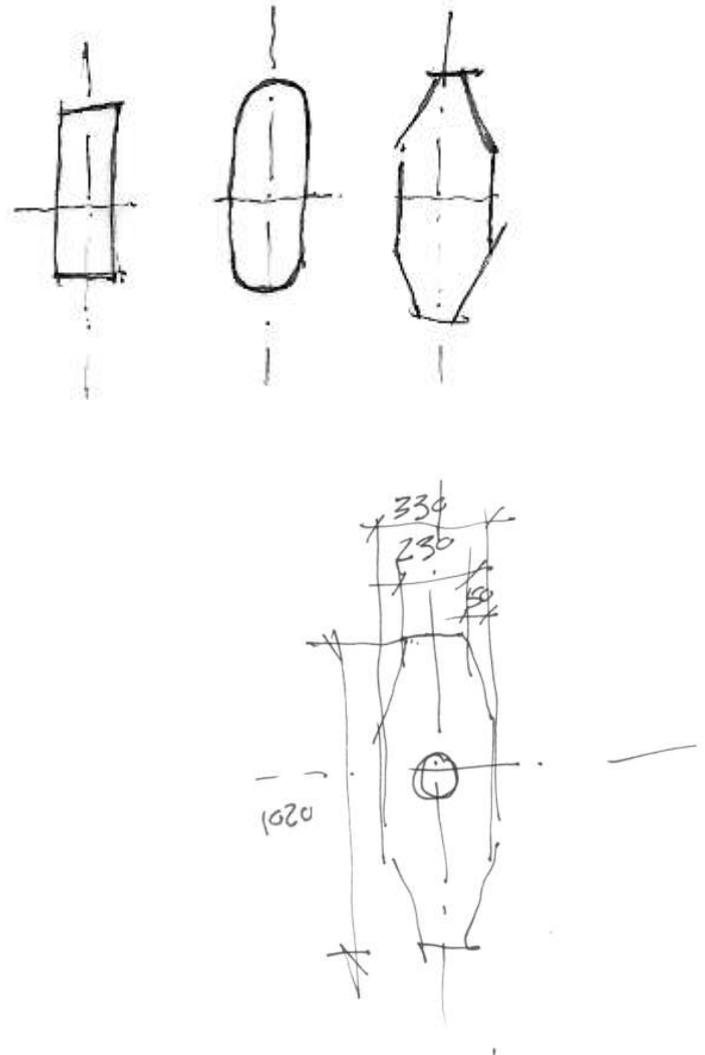
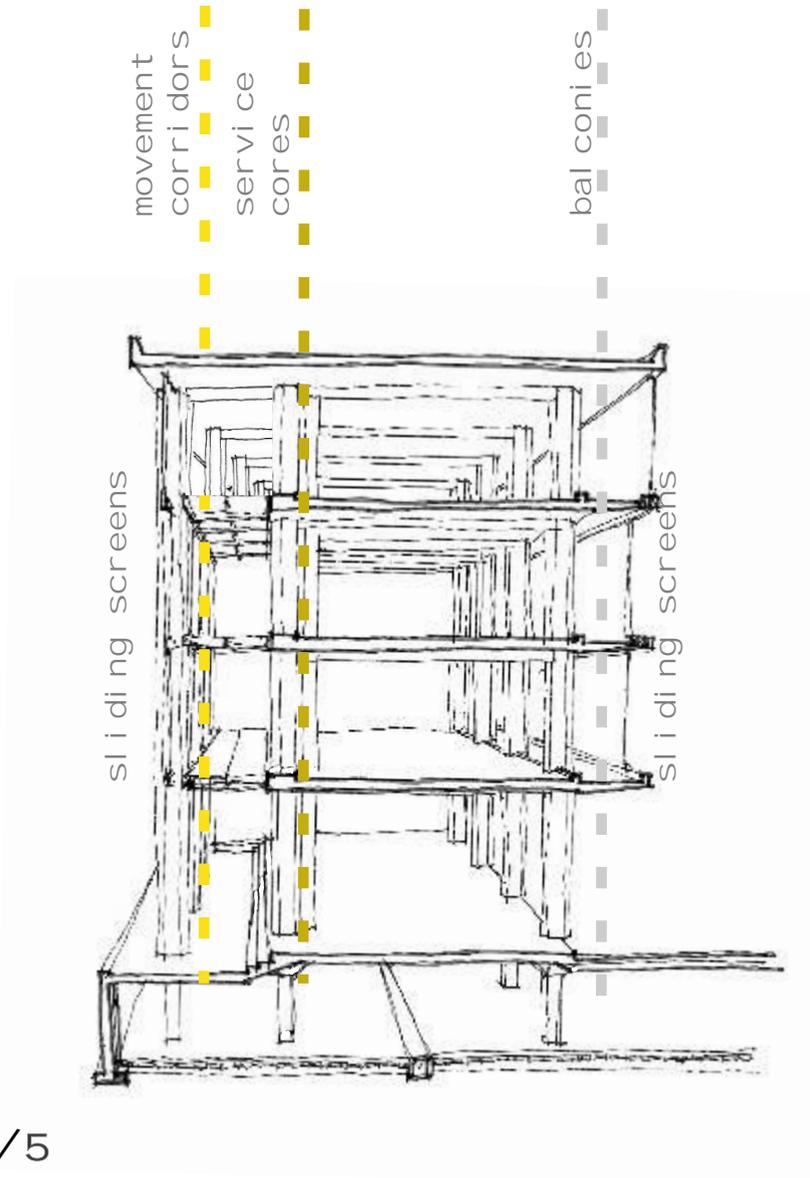


fig 5. 2 Concrete column shape investigation.



A 340mm cast in situ concrete roof is used over the eastern wing as concrete roofs have good thermal qualities. Parapet walls are to be 255mm high, with torch-on waterproofing over a 1:100 gradient screed.

The double skin facade system offers sun protection, enhances the use of natural daylight and acts as an acoustic buffer. On the eastern side steel walkways frame the public side of the building, while concrete balconies offer more private spaces on the western side.

Metal sheet roofing is used over the residential areas in the southern wing. The angle of the light weight roof allows space for the construction of clerestory windows that allow light to penetrate the space. The roof angle also adds to the spacious qualities of the small residential flats.

Different balcony cantilevers shape a protected outdoor area and shape its spatial qualities. The cantilevers offer sun protection during the summer and allow the sun to penetrate the space during the winter. The vertical concrete fins offer a sense of privacy for the upper levels and lend a rhythm to the facade.

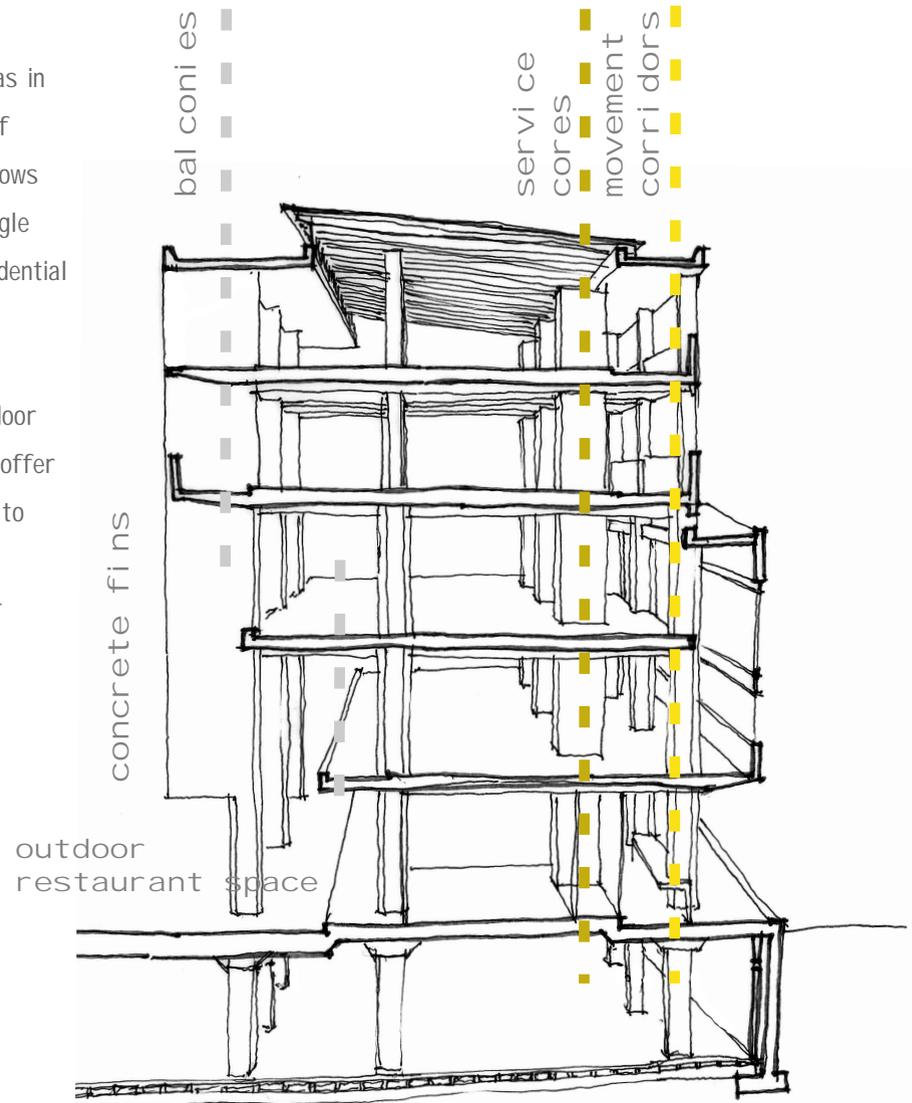
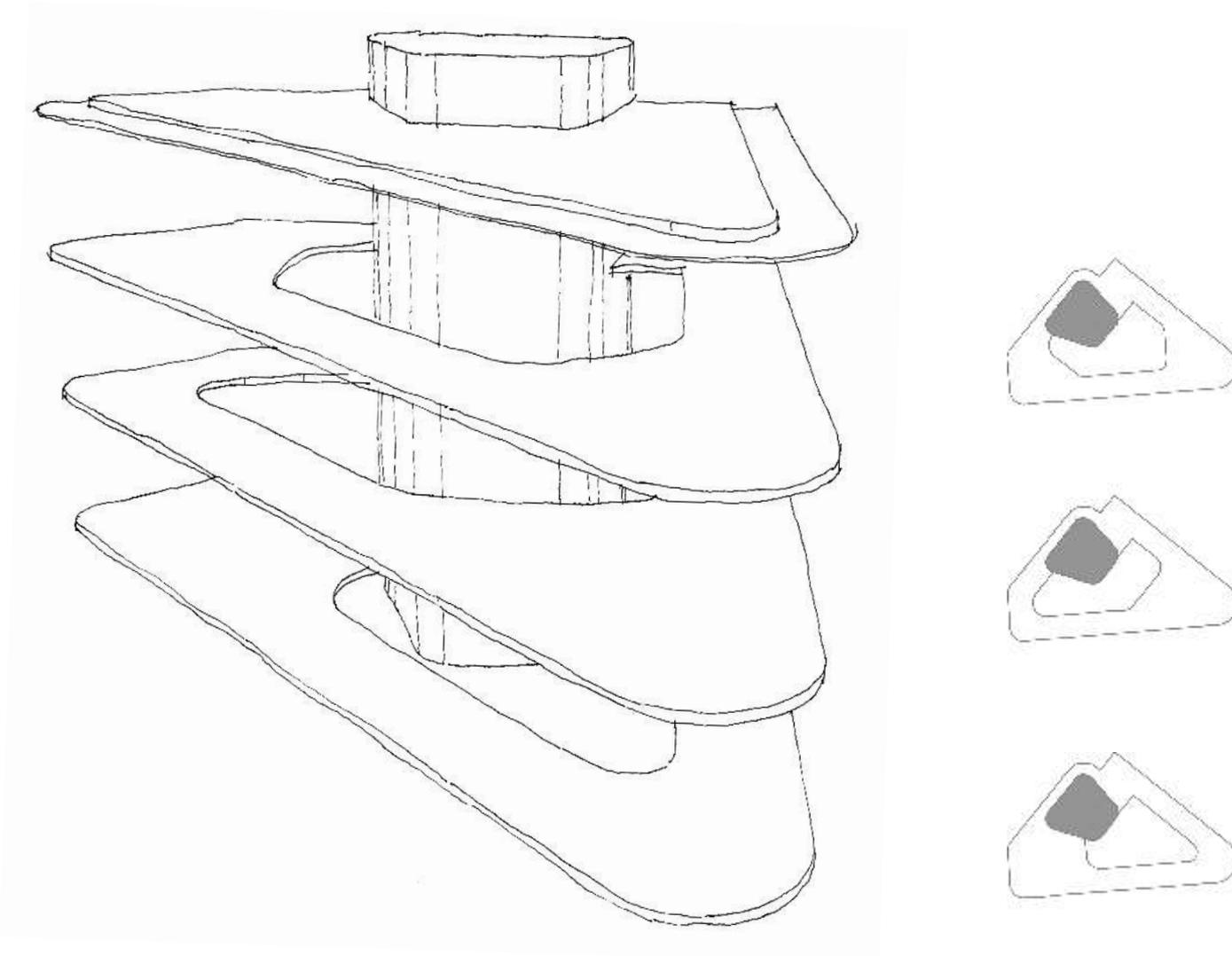


fig 5.4 The southern wing.



The proposed corner building supports the main vertical movement through the building and consists of three floor levels which form a central open atrium. The fluid form of the floors provide different experiential qualities on each level while the various balconies offer different views of the internal space.

The floors are constructed of cantilevered cast in-situ concrete slabs supported by a continuous ring-beam, thereby expressing the fluid qualities of concrete. The 1020 deep ring-beam is supported on 680 diameter round concrete columns and the central service core.

The tectonic mass of the concrete walkways is surrounded by a light stainless steel mesh screen, while a light composite roof construction covers the internal space.

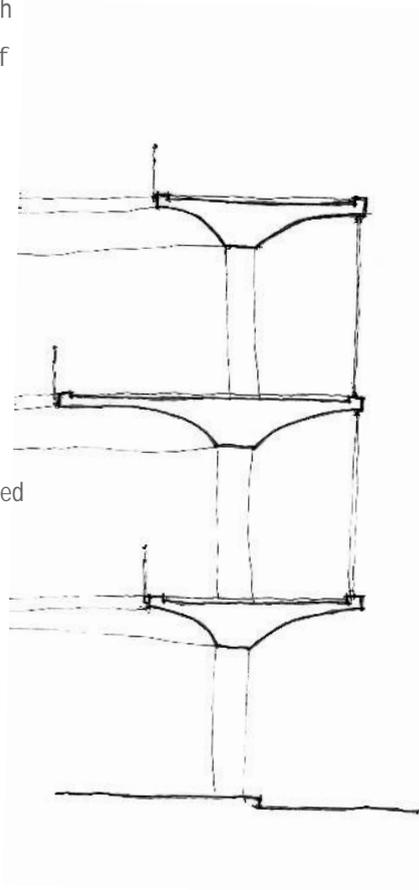


fig 5.6 Cantilevered concrete walkways.

fig 5.7 Exhibition hall of Congrexpo, France by Office for Metropolitan Architecture.



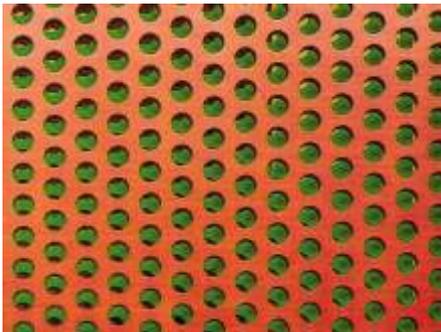
fi g 5. 8

Reinforced **concrete** is the main structural material for the proposed design. Floors, columns and roofs are constructed of reinforced concrete as a concrete structure offers various advantages. It is robust and requires minimal maintenance. Off-shutter methods for the cast in-situ concrete walls provide tactile textures to surfaces, and iron oxide pigments add colour to the surfaces. The plasticity of concrete also makes it possible to mould it into the complex forms required for the cast in-situ walkways of the main circulation space.



fi g 5. 9

Brick is a vernacular building material in South Africa and it forms part of the Pretoria aesthetic. Brickwork is a sustainable building material with low embodied energy and good thermal mass. It is a durable material that requires less skilled labour than cast in-situ concrete work.



fi g 5. 10

Plywood panels are used as suspended ceilings. Different ceiling heights improve the legibility of spaces and perforated plywood panels improve the acoustic qualities.



5. 2_MATERIALS

Boundaries between inside and outside are dissolved with the use of **glass**, while natural light is introduced into the building. Most glazing is fixed in aluminium frames, as aluminium has a long life span and requires less maintenance than steel. To link the interior to outdoor areas in a seamless manner, sliding or stack doors are used that can open up completely. This gives the user control over his or her immediate environment. Shading devices on the northern façade and screens on the eastern and western façades reduce the disadvantages associated with the use of glass.



fi g 5. 11

Steel is used as lightweight intervention in the concrete structure. Galvanised steel is used to construct the screen frames and the walkways between the building clusters. Steel structures can be adjusted or removed and recycled if necessary.



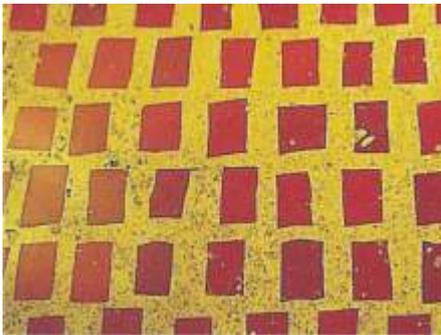
fi g 5. 12



fi g 5. 13

Different **floor surfaces** are used to mark different movement routes and interior spaces. Edges and thresholds are marked to guide movement.

Ground level floors are subjected to heavy traffic and need to be robust. The concrete basement roof slab is covered by a cast in-situ concrete floor along the main pedestrian routes, while brick paving is used to mark quieter areas within the square.



fi g 5. 14

Interior concrete surfaces are powder floated and sealed with polyurethane to produce a hard-wearing floor finish. Mosaic inlays in the concrete floor mark certain spaces and movement routes within the building on the ground floor.

Light walkways frame the eastern wing and form a contrast to the concrete surfaces. The walkways are constructed of steel mesh floors on steel substructures.



fi g 5. 15

A low profile **access flooring system** is used in the proposed design. Access floors make the adaptable services available and easily accommodate change. They are user and environmentally friendly, require little maintenance and are easily reconfigured. The proposed TecCrete System uses a concrete-and steel composite design. It has a low profile of 85mm, thus minimizing the level differences between indoor and outdoor spaces. It has a finished concrete surface and does not need a vinyl or carpet covering like conventional systems.

Screens form the main facade elements on the eastern wing and on the corner building. Stainless steel mesh screens require little maintenance, can be recycled and can be applied in various ways. They can appear opaque or totally transparent.

On the eastern wing sliding mesh screens offer sun protection and can be adjusted according to users' needs. On the corner building a fixed mesh screen is applied, as the individual control over the environment becomes less important.

Mesh screens offer the possibility of digital projections. Mediamesh and Illumesh systems are applied in the proposed design.

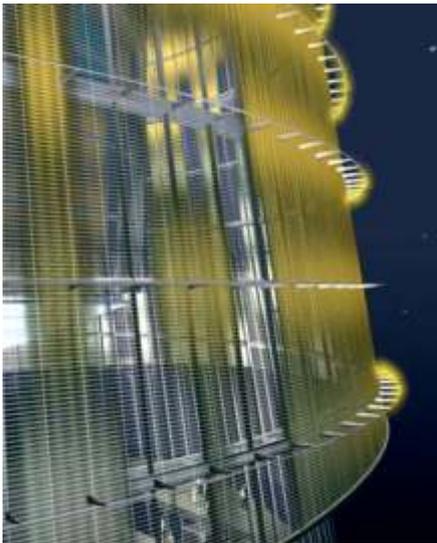


fig 5.16 (top) Fixed mesh screen.
fig 5.17 (bottom) Sliding screen facade.



fi g 5. 18

Mediamesh screens consist of stainless steel mesh screens with interwoven LED profiles, which are built into sleeves and inserted at predetermined intervals. Control units are easily hidden in ceilings or under access floors. Images can then be controlled from any internet connection point, making the system interactive and accessible to different users. The system can be used during night and day times to display images, messages, art-graphic animations and even direct video displays.



fi g 5. 19

In **Illumesh screens** the screen reflects images outwards from the inwards facing LEDs. This system is suitable for larger surfaces, which are viewed from a greater distance. Illumesh screens are also more cost effective than Mediamesh screens.



The proposed digital screens can function together to display a large image, or they can function in isolation, breaking the facade up into smaller units. The facade units thus act as larger 'pixels' of an entire image.



fig 5. 20 Images fragmented into pixels.

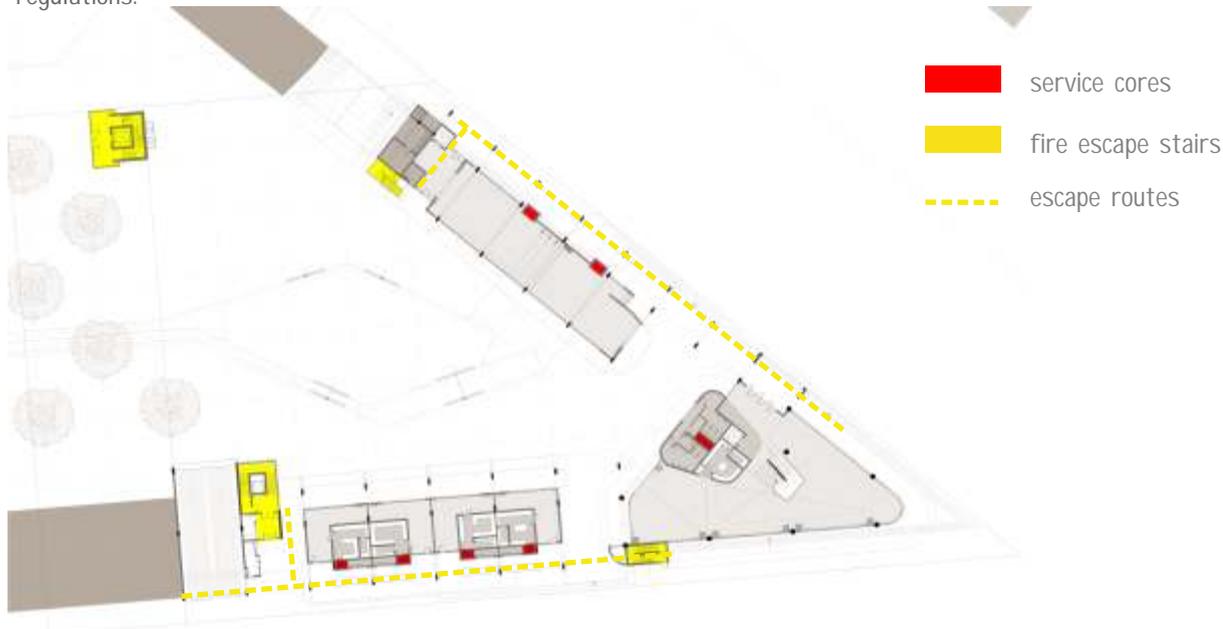
Inclusivity:

This is a public building and therefore has to be easily accessible. All public areas and public amenities are accessible to people with disabilities. Lifts within the building ensure easy access to all areas and disabled restroom facilities are provided on each floor level.

Ramps that are located around the building have a maximum gradient of 1:12, as required by the building regulations.

Security:

All areas will be observed through passive surveillance during the day time. On ground floor level all edges are active. Informal activity is encouraged along the edges at the street side, where users can monitor the sidewalks. The offices, flats and studio spaces have good viewing angles over the public square, thereby establishing a relative degree of control. Additional measures may be required at night to ensure the safety of the residents.





5. 3_CIRCULATION

Fire strategy:

The public nature of the building requires a high degree of safety in the event of a fire. The National Building regulations were followed in the proposed design.

According to NBR TT 16, all travel distances in the building to escape doors are to be kept below 45m. A three story building shall be provided with at least two escape routes and an emergency route is required in a building of a height of more than three storeys. Building materials in an emergency route shall have a fire resistance of not less than 120 minutes.

The concrete structure will provide sufficient fire resistance. All structural steel elements are to be coated with an intumescent base coat to provide adequate protection in the event of a fire. Sizes of steel members are increased to improve the fire resistance properties. A specialist will be required to ensure that all appropriate design measures are used.

The basement shall be served by at least two separate emergency route stairways, according to NBR TT 22. The main lift to the square is to be a fireman's lift.

Orientation:

The building clusters are orientated on two different angles. The southern wing faces towards the north. This is ideal for the residential flats and the offices. The facades of the eastern wing face east and west and therefore require sun protection. Movable metal mesh screens are used, giving the users control over their interior environment. This also strengthens the transparent aesthetic of the eastern wing; in contrast to the 'heaviness' of the formal southern wing.

Throughout the design a double skin is used, with walkways and balconies shaping the 'in-between', event space between the building structure and building skin.

Thermal massing:

Thermal mass is provided by the flat concrete roof and exterior walls. Direct solar radiation is absorbed during the day and the accumulated heat is radiated into the interior spaces at night time. The density and thickness of the material determines the delay period and the effectiveness

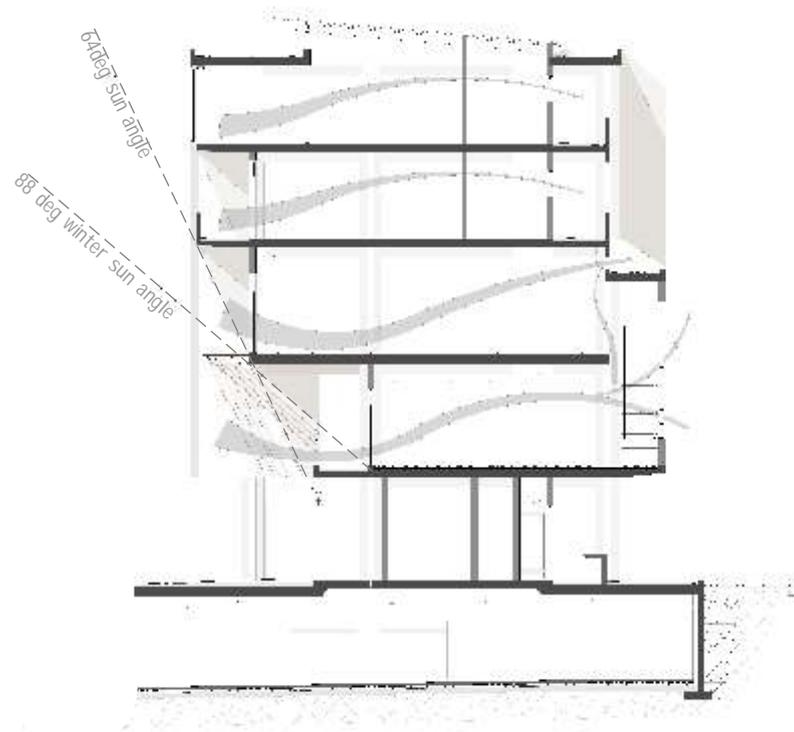


fig 5. 22 Ventilation and Lighting in south wing.



5. 4_CLIMATE CONTROL

Ventilation:

The building dimensions allow it to rely on passive control systems, thereby reducing the amount of energy used.

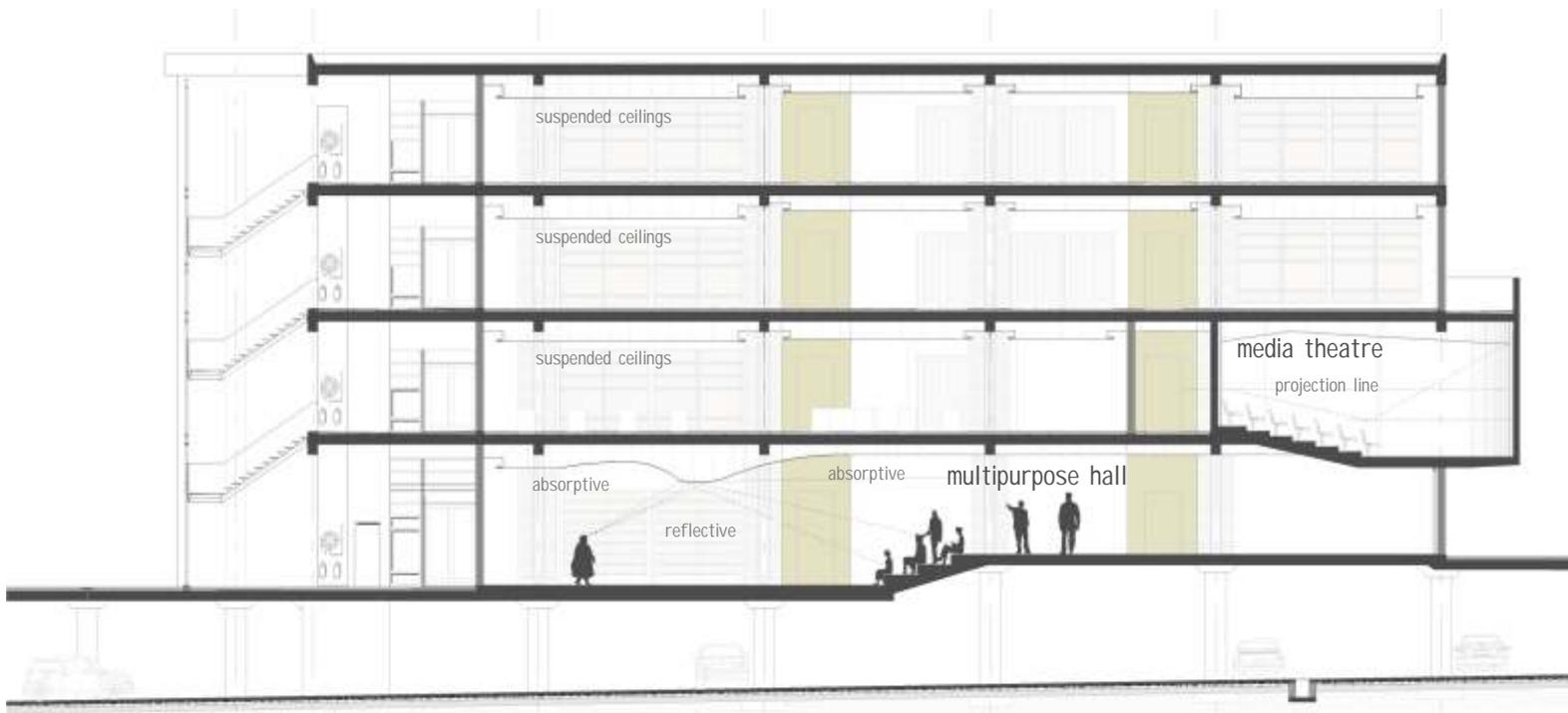
Pretoria has a dry and warm climate where the prevailing summer wind direction is from the north-east while it is from the south-east in the winter.

Natural ventilation through a building is generated by differences in air pressures. A building's form and orientation are important factors when relying on natural ventilation. The glazed openings in the proposed building face the summer winds. Low openings direct the air flow at occupants and roof overhangs increase the incoming airflow. Larger outlets allow the rising warm air to escape.

Mechanical ventilation will be necessary in the basement and in the screening room.

Lighting:

Diffused natural lighting provides light for the interior activities during the day time. Direct lighting is not optimal, as it causes glare and does not contribute to a comfortable indoor temperature. It is important that users have control over their environment, especially the in the studios. This increases the flexibility of the building, allowing different activities to take place. The double skin façade is therefore applied, whereby natural light is diffused by individually movable screens.





5. 5_ACOUSTICS

Media theatre:

The walls are constructed of 200mm reinforced cast in-situ concrete. To prevent flutter echoes the floor and ceiling surfaces are not parallel. The reflection of sound at the back, i.e. reverberation is prevented by using highly absorptive materials on the wall and ceiling.

To get the best acoustic isolation, the wall has to be as airtight as possible; an absorptive cavity should be used with a cover which is fixed to the wall with a minimum number of mounting strips. In the proposed design a 50mm mineral wool blanket is fixed to the walls and perforated plywood panels on a suspended timber structure form a cavity.

Openings in the walls have to be kept to a minimum.

Access to the screening room is therefore through a sound lobby with double wooden doors.

Multi-purpose hall:

A suspended perforated plywood ceiling is used to improve the acoustic qualities in the space. The ceiling is profiled in order to reflect or absorb sound in required areas, and prevent standing waves (see fig 5.24). The sound absorption depends on the angle of incidence.

The front and back of the ceiling should be absorbent, while a reflective ceiling at the center reflects sound into the audience.



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



.....C O N C L U S I O N.....

chapter

06



The project is shaped and informed by the living urban surface in which it is set. It is specific to its site and program, rather than the product of a formal and aesthetically driven vision.

The design offers interactive spaces that act as generators of events. In order to increase the design's capacity to support various activities in time, the design needs to be flexible. This has been addressed with four key elements characteristic of flexible design: adapt, transform, move and interact. The application of these elements allow the building to transform into a living connective skin that transforms between the fragments of unforeseen future programs:

becoming part of the city skin.



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

.....D R A W I N G S

chapter 07



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



DR SAVAGE GATEWAY

site plan
scale 1:2000



0 10 100

PRINSLOO

1305
MTV PRODUCTION STUDIO

5

6

train stop & raised pedestrian crossing

2

DU TOIT

1306
access tower from basement

7

9

8 9 10 11 12

tree planters and seats

11

13

1307

corner building with high historical value

DIGITAL AWARENESS CENTRE

12 10

access to library across the bridge street from

10

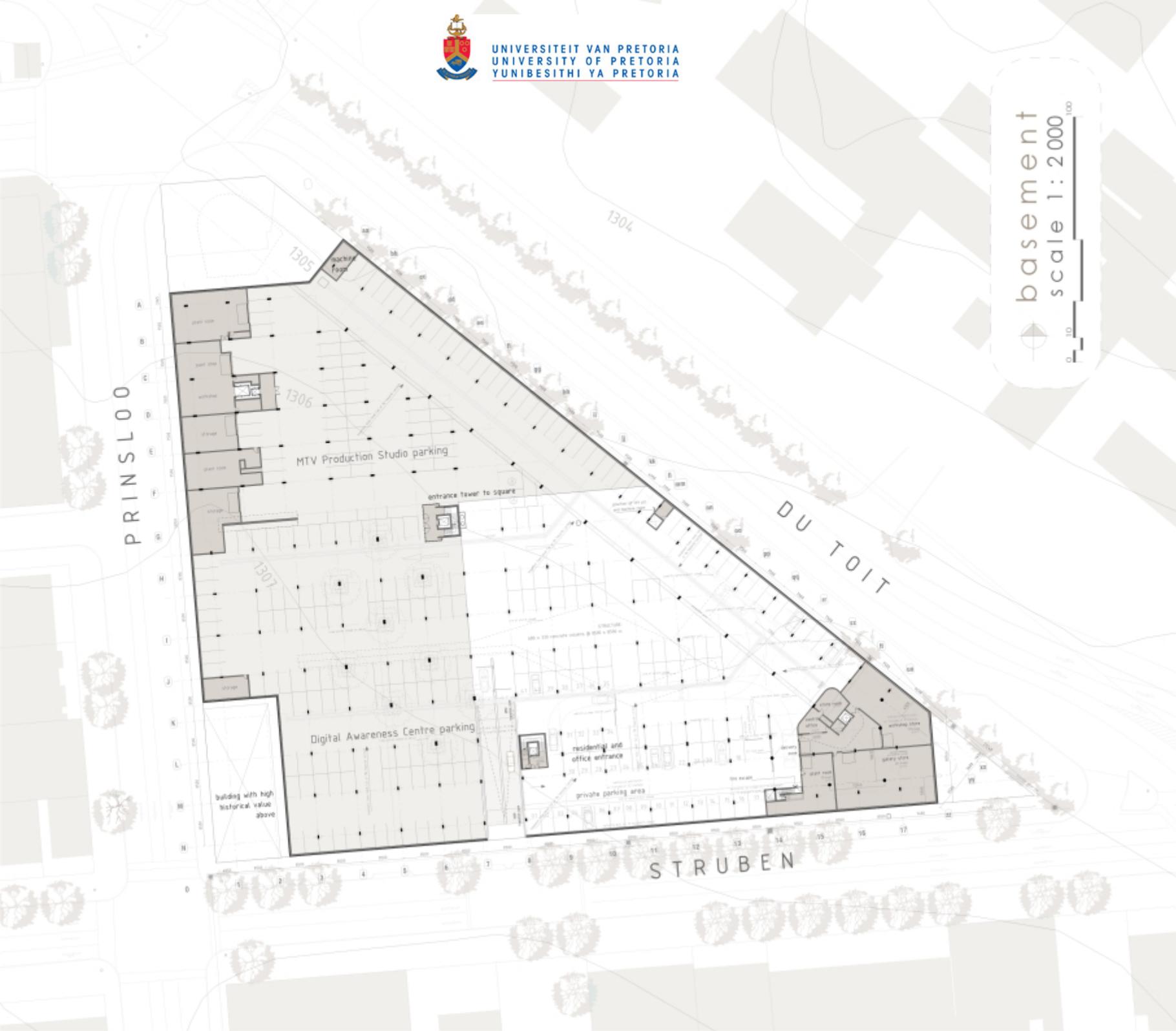
existing akarenda mimosa/oliva trees

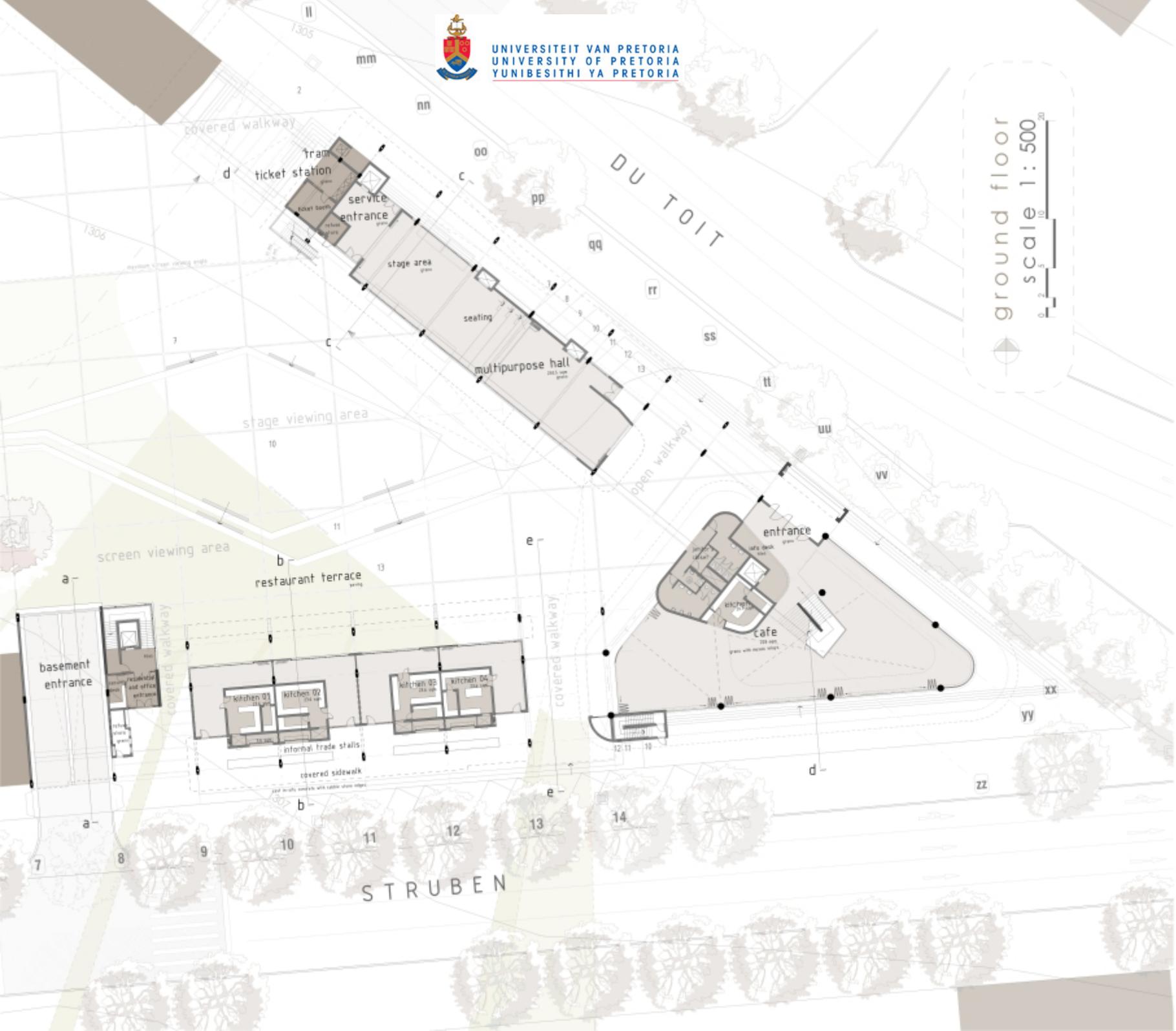
raised pedestrian crossing

STRUBEN



basement
scale 1:2000



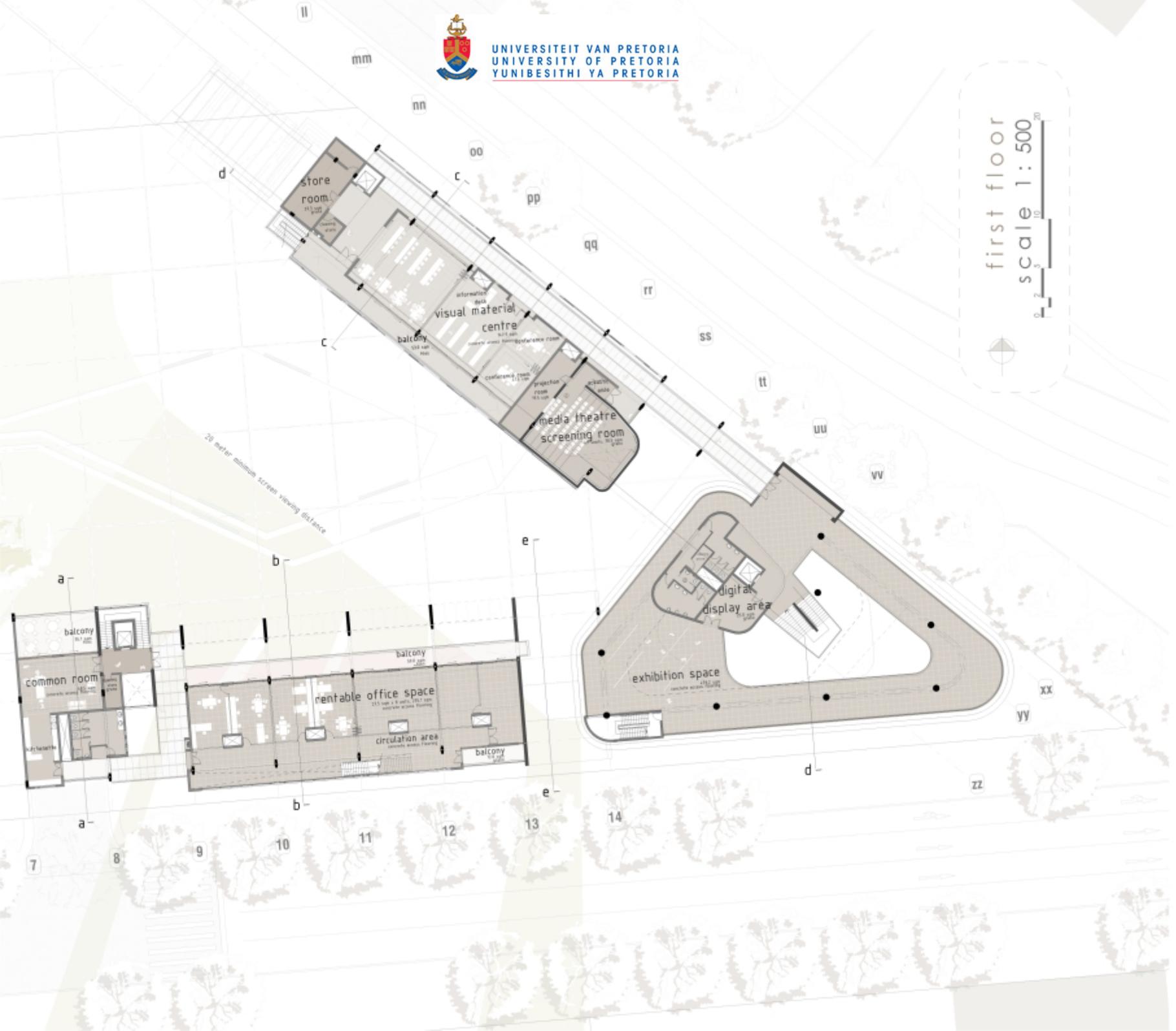


ground floor
scale 1:500



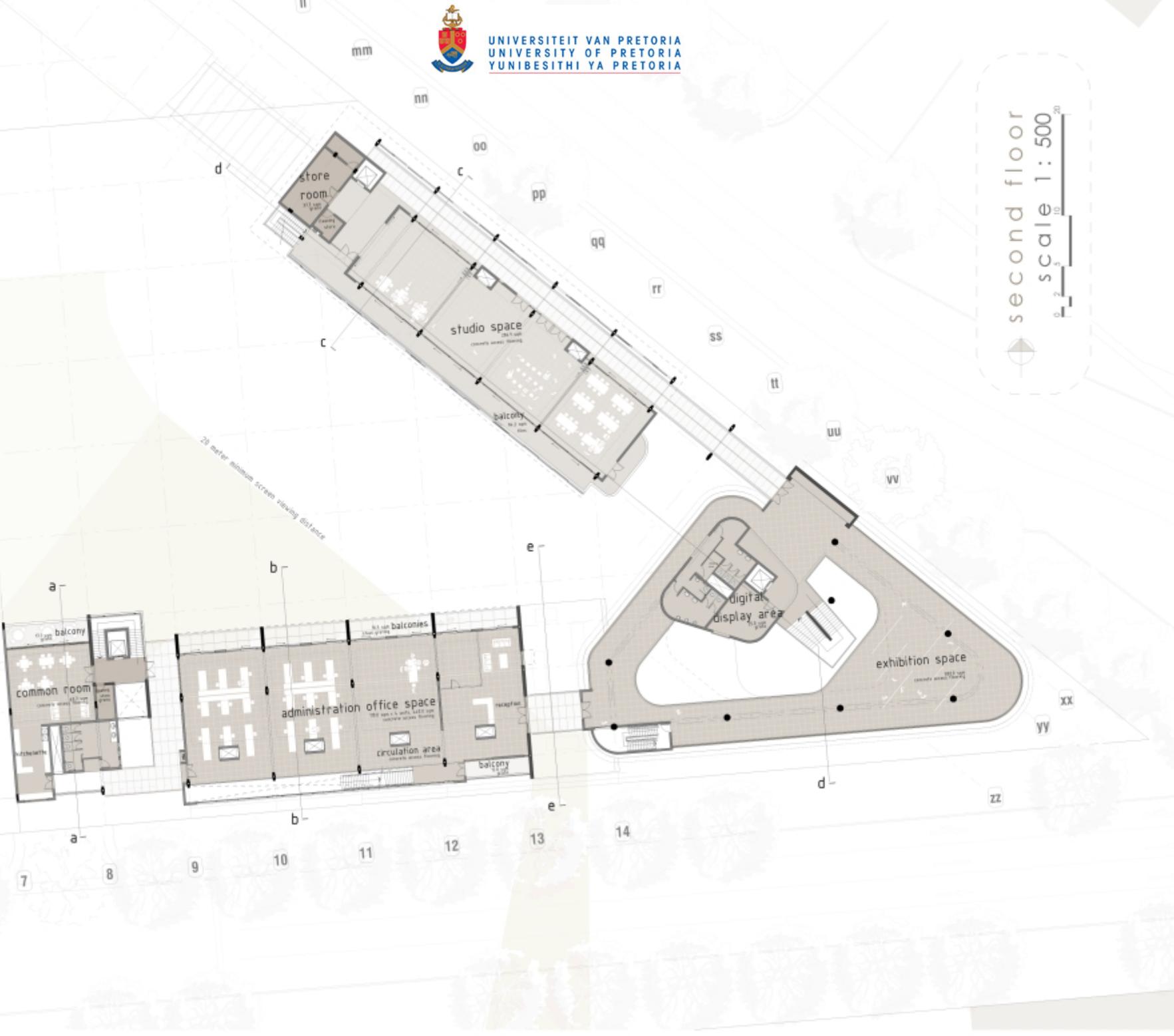


first floor
scale 1:500



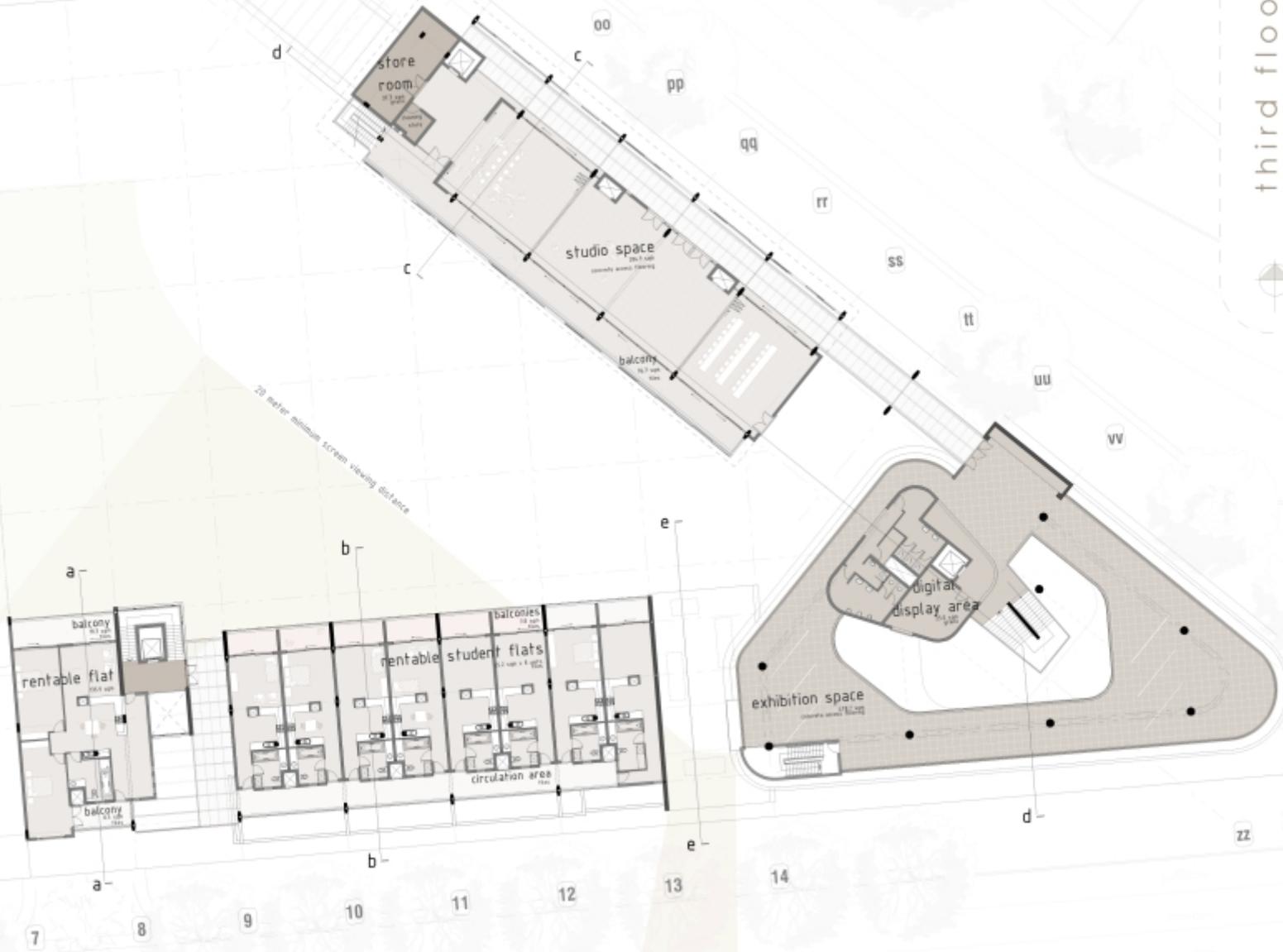


second floor
scale 1:500



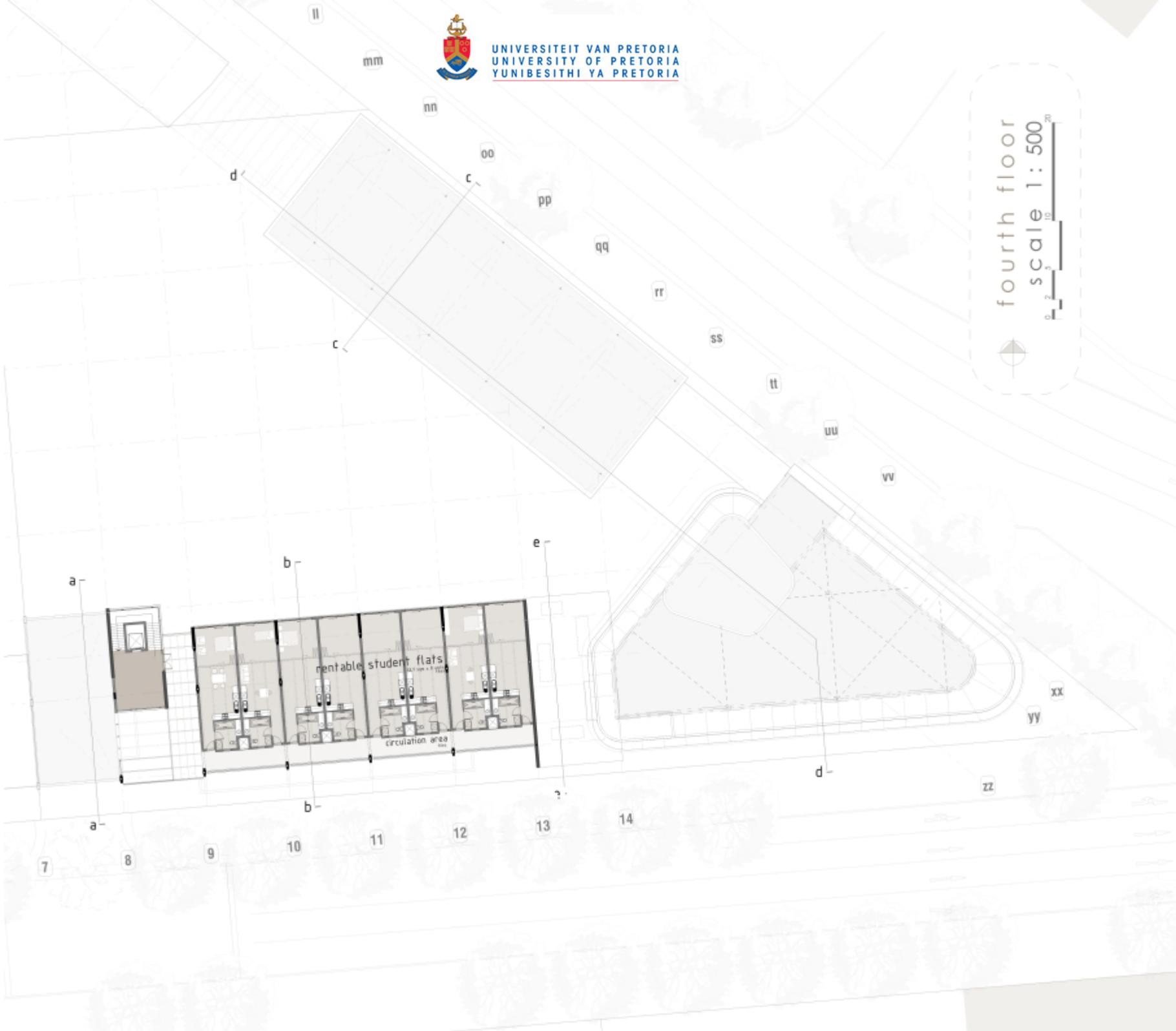


third floor
scale 1:500



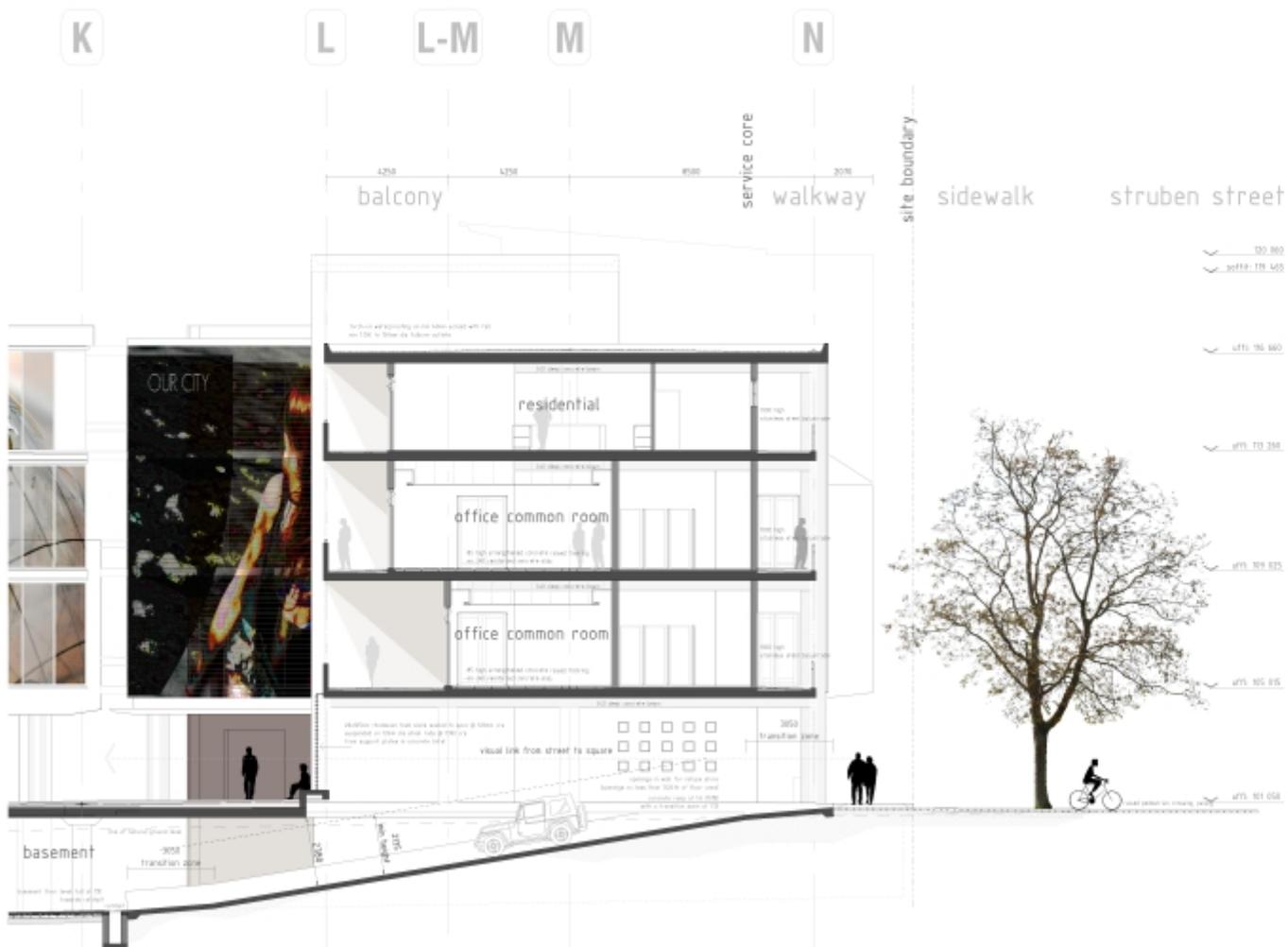


fourth floor
scale 1:500



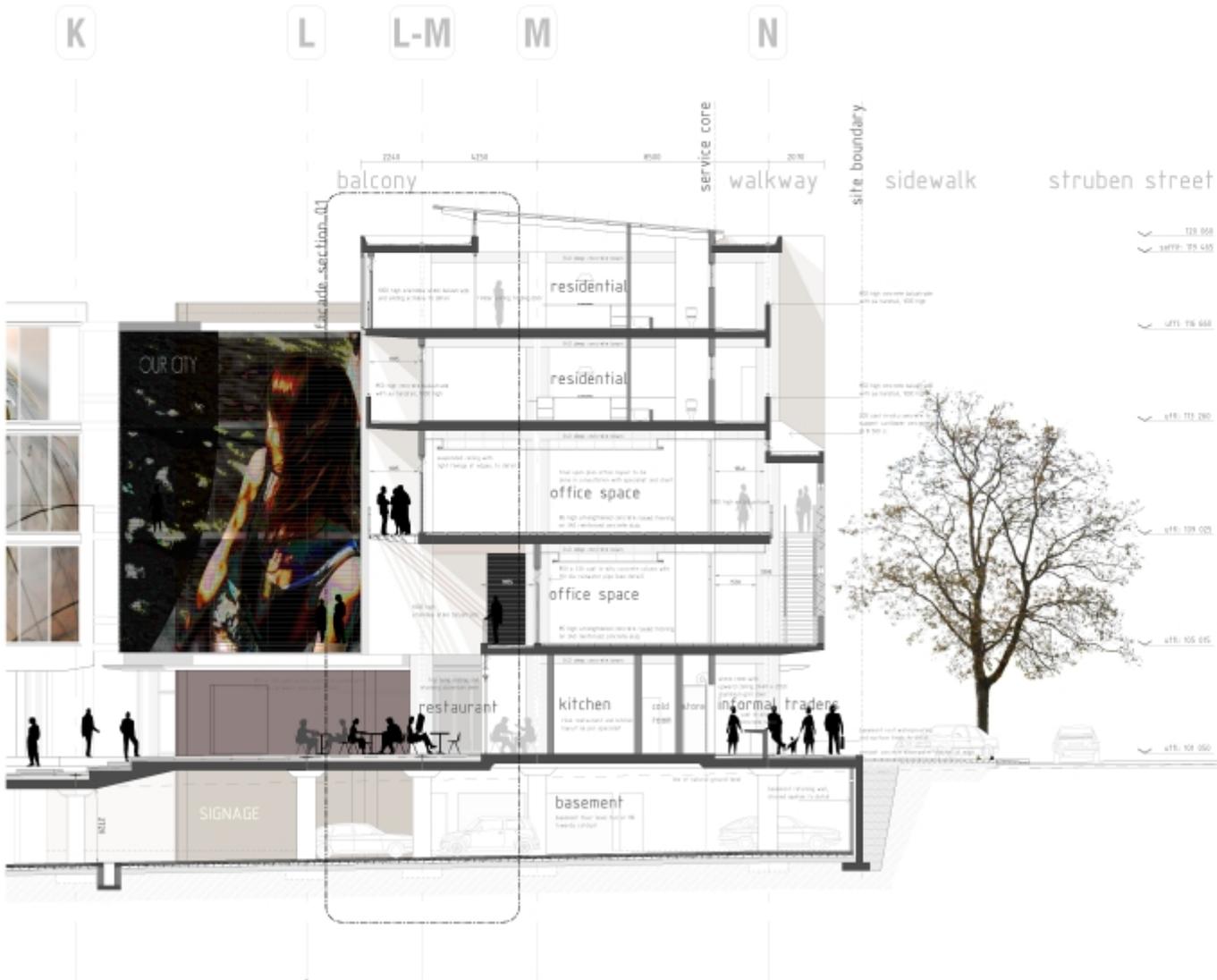


section a-a
scale 1:500



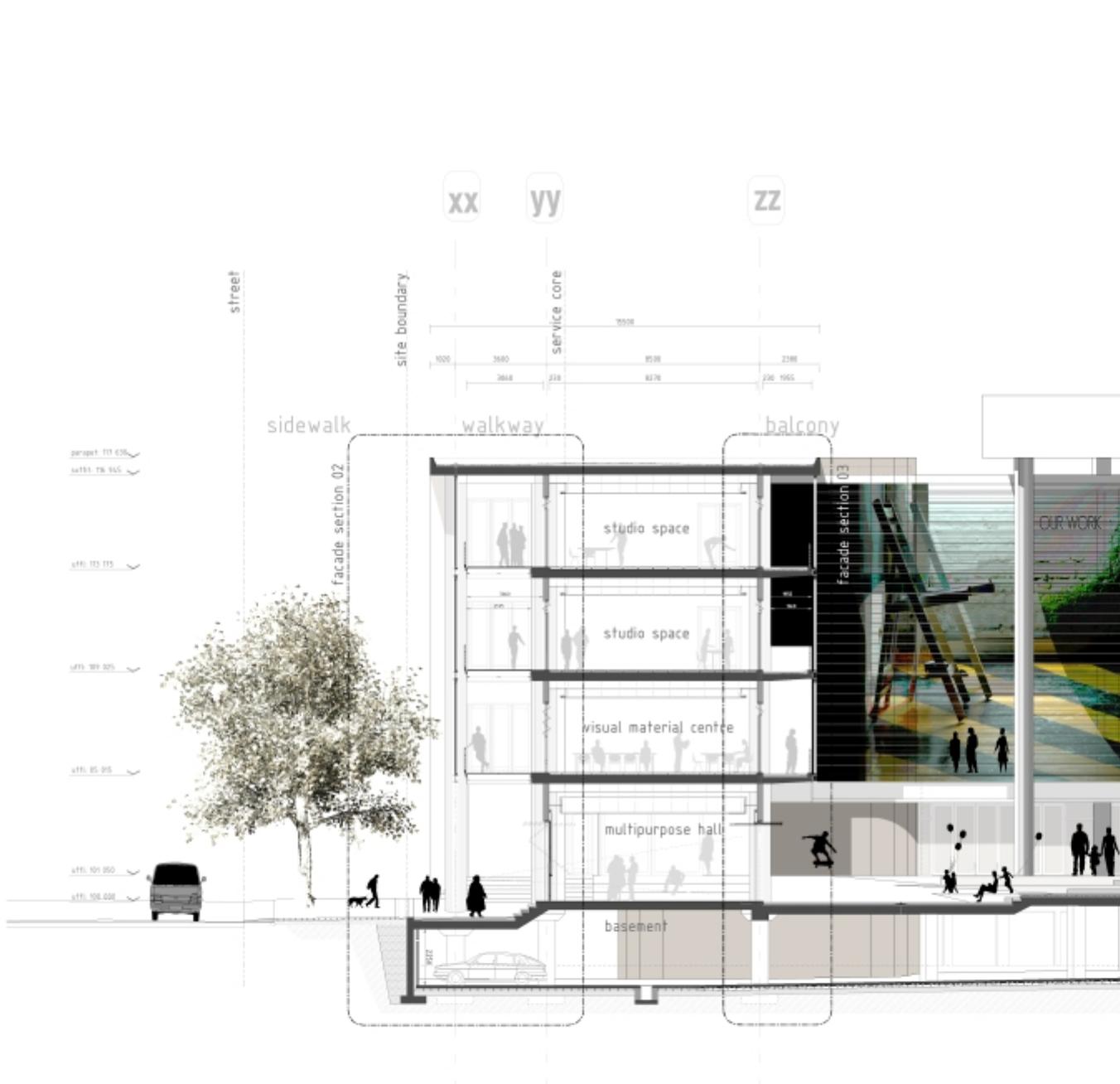


section b-b
scale 1:500





section c-c
scale 1:500





north elevation
scale 1: 500

13

12

11

10

9

8





mm

nn

oo

pp

qq

rr

ss

section d-d
scale 1:500





mm

nn

oo

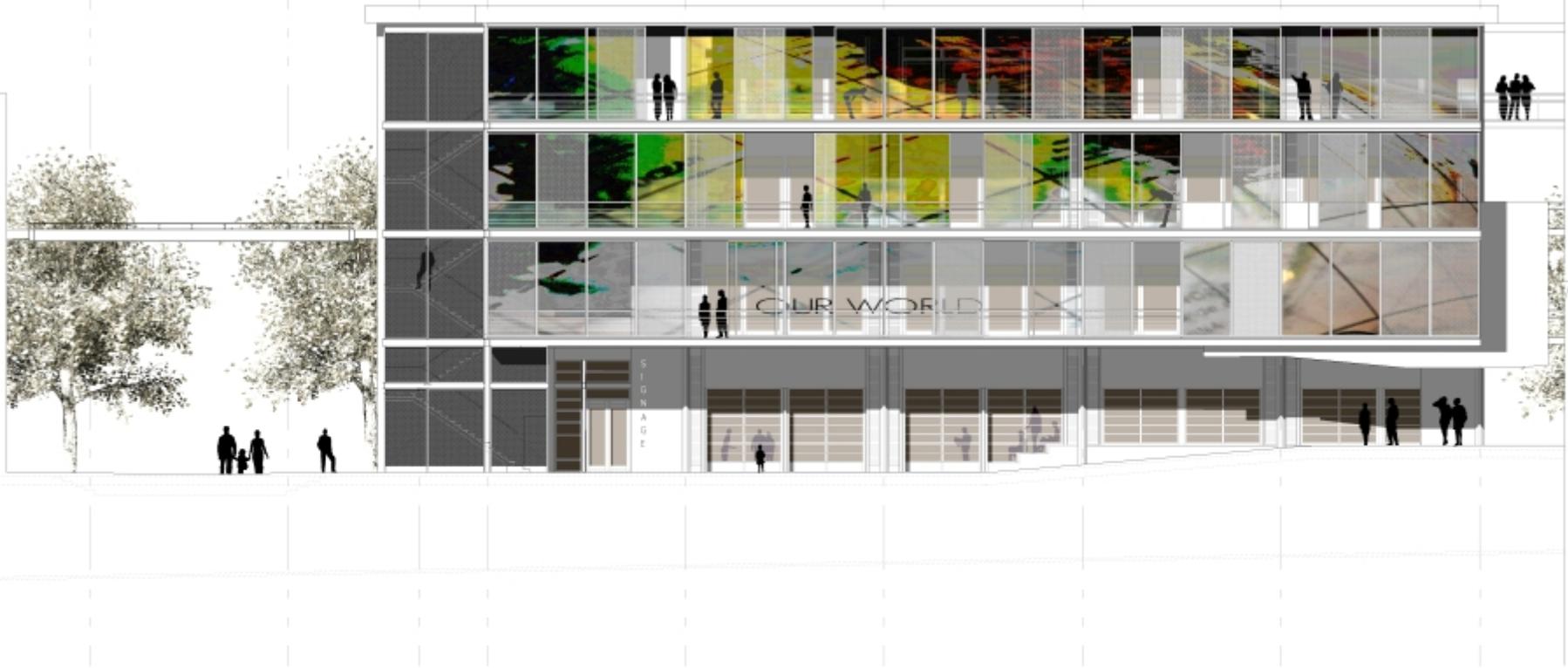
pp

qq

rr

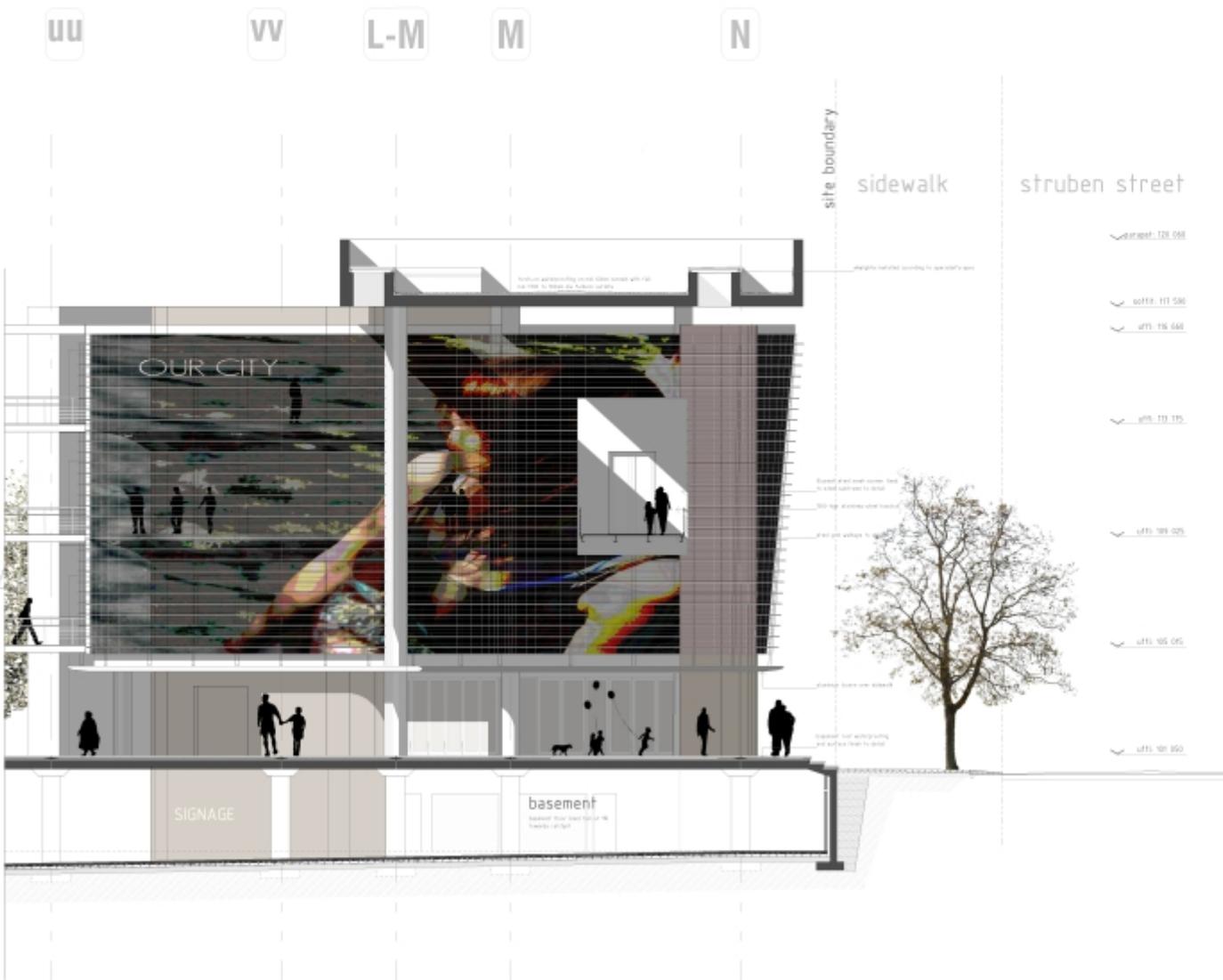
ss

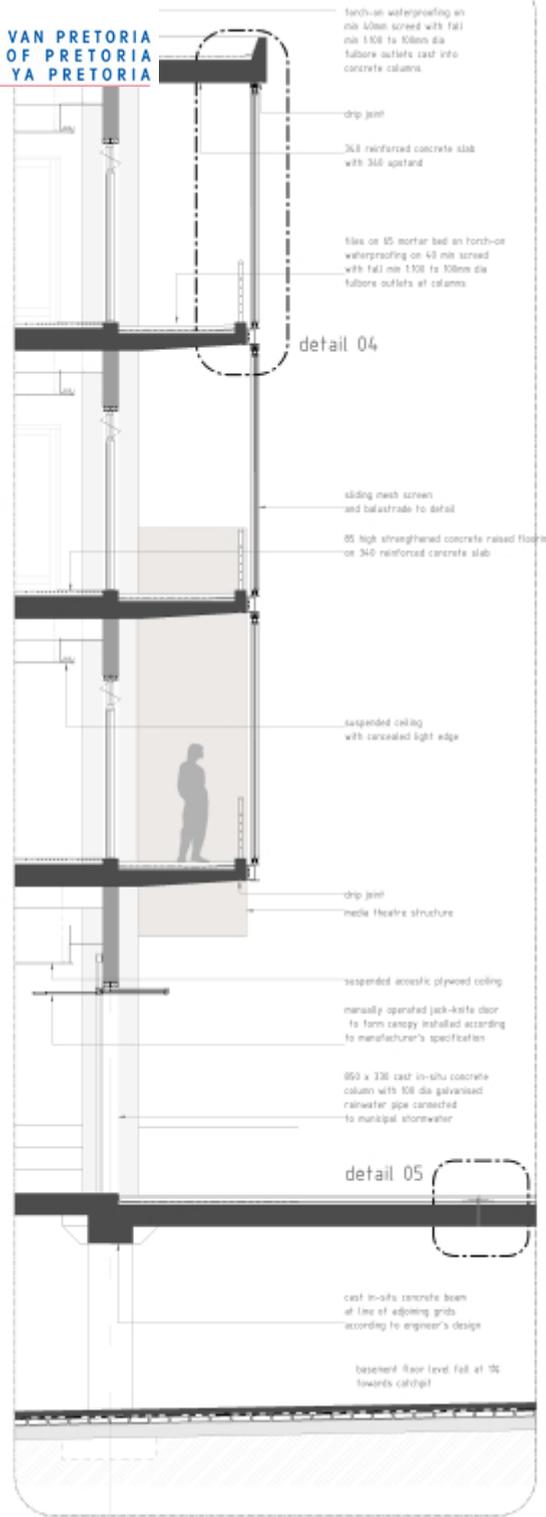
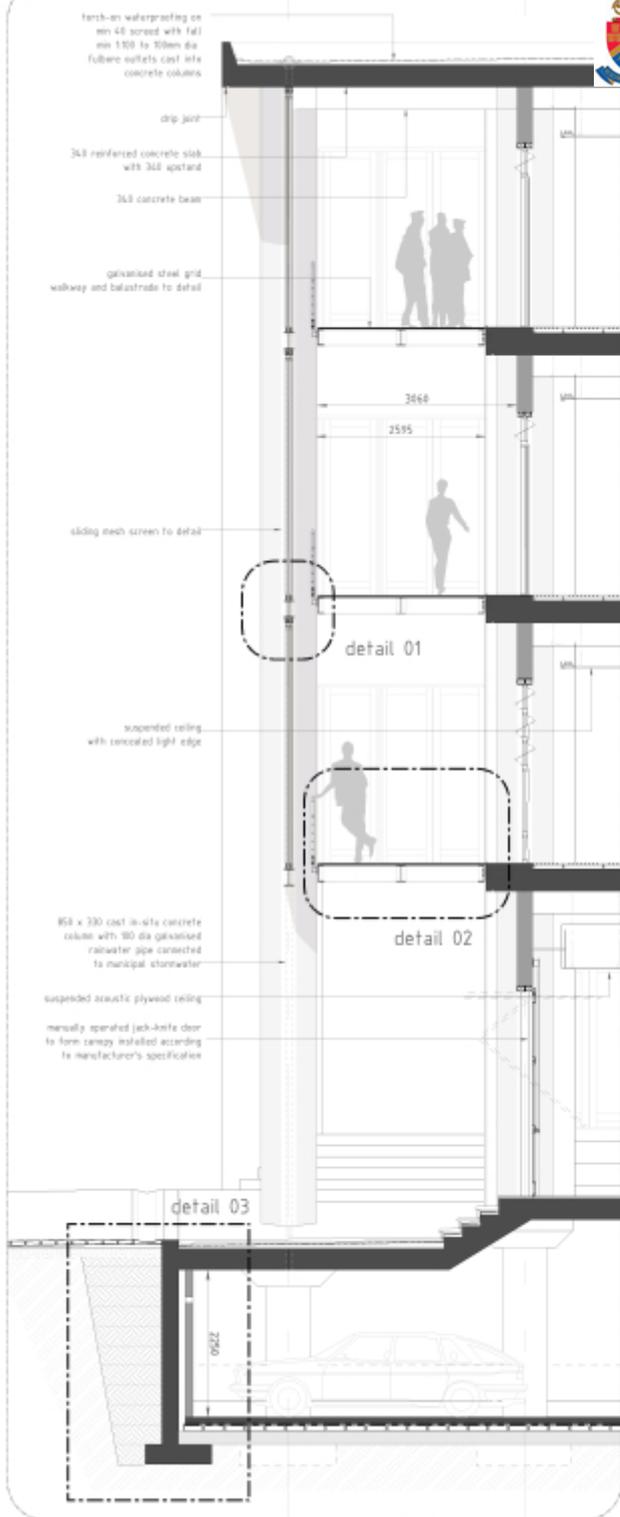
west elevation
scale 1: 500





section e-e
scale 1:500





facade section c-c
scale n/a



A. 1	COUNCI L DOCUMENTS	[02]
A. 2	ACCOMMODATI ON SCHEDULE	[06]
A. 3	AREA I NFORMATI ON	[09]

appendi ces

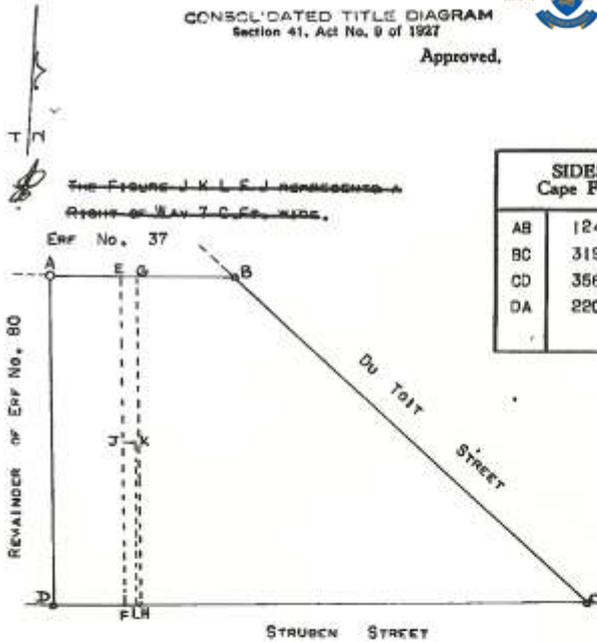


CONSOLIDATED TITLE DIAGRAM
Section 41, Act No. 9 of 1927

Approved,

[Signature]
Surveyor General
22-7-1955

SIDES Cape Feet		ANGLES	
AB	124,64	A	90. 0. 0
BC	319,60	B	136,30,00
CD	356,50	C	43,30,00
DA	220,00	D	90. 0. 0



Scale 1: 1000

The Figure A B C D A

* Now known as ~~205~~ Erf No. 3054

represents 52925,4 square feet

52492

of land being

* CONSOLIDATED ERF No. B1

TOWNSHIP OF

PRETORIA

AND COMPRISES

1. THE FIGURE A E F D A BEING THE REMAINDER OF PORTION OF ERF No. 80 IN EXTENT 72 Sq.Rds. 82 Sq.Ft. VIDE DIAGRAM S.G. No. A 2664/05 TRANSFER No. ~~5586/05~~
2. THE FIGURE E G H F E BEING PORTION ~~OF~~ OF ERF No. 80 IN EXTENT 16 Sq.Rds. 116 Sq.Ft. VIDE DIAGRAM S.G. No. A 2665/05 TRANSFER No. 5587/1905
3. THE FIGURE G B C H G BEING ERF No. B1, IN EXTENT 278 Sq.Rds. 23,4 Sq.Ft. VIDE DIAGRAM S.G. No. A TRANSFER No. ~~1211/1855~~ 0-11-1857



situate in the District of PRETORIA.

Province of Transvaal

Compiled in JUNE 1955,

by me

[Signature]
Land Surveyor

This diagram is annexed to
Transfer Deed No.

Dated
In favour of

TR. 29627/55

The existing diagrams
are as quoted in the
description

File 604/7815/55
General Plan No.
Survey Records

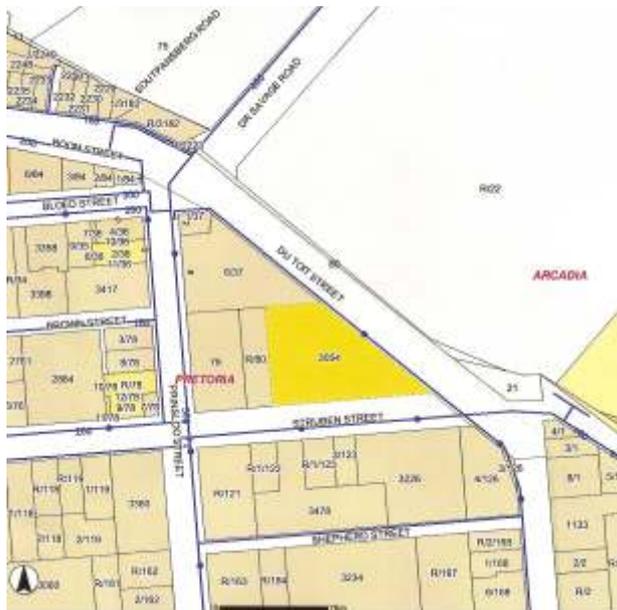
RS5C-24
02

REGISTRAR OF DEEDS.

1_COUNCIL DOCUMENTS

SITE: Erf 3054, corner of Struben and Du Toit Street, Inner City of Pretoria.

GISKEY	OBJECTID	ADDRESS	STREET NAME	TOWNSHIP	NAME	OWNER TENANT	ACTIVE INACTIVE	POSTAL ADDRESS
53603054	723941	0378	STRUBENSTRAAT	PRETORIA	TOITSTRU PROPERTIES PTY LTD	T	A	P.O. BOX 2233 SILVERTON 0127
53603054	723941	0378	STRUBENSTRAAT	PRETORIA	TOITSTRU PROP P/L	O	A	P.O. BOX 2233 SILVERTON 0127



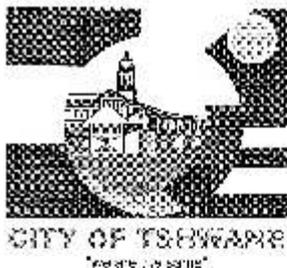
Water connection points.



Sewerage connection points.



**DEPARTMENT OF HOUSING,
CITY PLANNING AND
ENVIRONMENTAL MANAGEMENT**



Tel: (0) 21 858 7661
Fax: (0) 21 858 6022
E-mail: info@tshwane.gov.za

PO Box 1212
1601
TSH

www.tshwane.gov.za

CITY PLANNING DIVISION

Your City, Your
Our City, Our Vision

Enquiries / Naviso: Mpho Mofokarake
Date: December 14, 2017

TO WHOM IT MAY CONCERN

**ZONING CERTIFICATE:ERF 3054 PRETORIA CENTRAL,PRETORIA TOWN-PLANNING
SCHEME, 1974**

1. USE ZONE: GENERAL BUSINESS

2. APPLICABLE ANNEXURE B

B 3319

3. PURPOSES FOR WHICH BUILDINGS MAY BE ERRECTED OR USED OR LAND-USED:

- Business Buildings
- Government Buildings
- Parking Garages.
- Parking Sites in terms of Schedule X.
- Places of Instruction.
- Places of Public Worship.
- Places of Refreshment.
- Residential Buildings.
- Restricted Industries in terms of Schedule X.
- Retail Industries.
- Shops.
- Social Halls
- Vehicle Sales Malls in terms of Schedule X.

**PURPOSES FOR WHICH BUILDINGS MAY BE ERRECTED OR USED OR LAND-USED
ONLY WITH THE CONSENT OF THE CITY COUNCIL:**

- Dwelling-houses.
- Filling Stations.

- Institutions
- Motor Workshops.
- Places of Amusement.
- Public Garages.
- Restricted Industries which do not fall under Schedule X but create no danger or nuisance of noise, dust, smoke, fumes or smell.
- Special Buildings.
- Sports Grounds.
- Warehouses.

**5. PURPOSES FOR WHICH BUILDINGS MAY NOT BE ERRECTED OR USED OR
LAND-USED:**

- Panel-beating and Spray-painting.
- Other uses not in Columns (3) and (4).

6. DENSITY:

Null

7. FLOOR SPACE RATIO:

Per attached Annexure B

8. HEIGHT:

Per attached Annexure B

9. COVERAGE:

Per attached Annexure B

10. BUILDING LINES:

Street : 3.5m
Sides : Null

11. ATTACHED DOCUMENTS:

- Schedule one
- Annexure B 3319

Kind regards



f GENERAL MANAGER: CITY PLANNING



ANNEXURE B3319

USE ZONE VIII: GENERAL BUSINESS

A. The erven are further subject to the following conditions:

1. The total coverage of buildings shall not exceed 80% of the area of the erven.
2. The floor space ratio shall not exceed the following:

Erf 115	: 1,0
The Remainder of Erf 116	: 1,0
Portion 1 of Erf 116	: 1,0
Portion 1 of Erf 157	: 0,8
Portion 1 of Erf 162	: 0,8
The Remainder of Portion 2 of Erf 168	: 0,8
Portion 8 of Erf 168	: 0,8
Erf 3031	: 0,8
Erf 3054	: 0,8

3. All parts of the erven on which motor vehicles may move or park, shall be provided with a permanent dust-free surface, which surface shall be paved, drained and maintained to the satisfaction of the City Council.

B. Erf 3271 is further subject to the following conditions:

1. The total coverage of buildings shall not exceed 70% of the area of the erf.
2. The floor space ratio shall not exceed 1,0.
3. Parking: 23 Parking spaces shall be provided on the erf for the existing buildings. Parking shall be provided according to the Town Planning Scheme, should there be any additional development.
4. Access to the erf must be to the satisfaction of the City Council.
5. Physical barriers must be erected and maintained (if necessary) on the street boundaries (approved entrances excluded) to the satisfaction of the City Council.
6. Above-mentioned conditions A1 and 2 and B1 and 2 may be amended with the consent of the City Council, subject to the provisions of Clause 18 of the Town-planning Scheme.





public 
 semi-public 
 private 
 services 

Core

South wing

East wing

area	related functions	requirements
main foyer	entrance reception information desk	legibility as a main entrance access security
digital gallery cafe	seating area kitchen	controlled lighting, mechanical ventilation spill-over space to street delivery access from street
circulation	'in-between' event space fire escape route storage	maximum public exposure disability access
restrooms		
basement parking	public entrance to square; private entrances fire escapes	disabled access legibility
store	control office plant room	artificial lighting mechanical ventilation
private entrance	pedestrian gateway into public square security desk fire escape access to basement mailboxes refuse area storage	legibility security access to street
restaurants & fast-food outlets	seating area Kitchen Storage	spill-over space to public square ventilation & hygiene access for delivery vehicles
offices	reception common room	flexible service access natural lighting & ventilation
circulation	event space	
residential		natural lighting & ventilation
tram stop and ticket sales	ATM	security
semi-private entrance	storage	security
circulation	event space	
workshop area	multipurpose hall public gathering exhibitions events	maximum public exposure flexible space indirect, controlled lighting spill-over to public square robust structure
multi-media room	projector room	controlled lighting controlled access acoustics
archives	reception storage	flexible service access natural, diffused lighting
conference rooms studio space	storage	indirect, controlled lighting flexible space



PARKING SCHEDULE:

		m ²	parking bays
RETAIL	1/100 m ² (staff) or 1/staff	88	8
	1/25 m ² (customers)		4
RESTAURANTS	1/ household	4	4
	1/ 3 members employed	6/restaurant	24
	1/2 customers loading (min 50 m ²)	440	110
GALLERY	1/2 members (staff)		2
	1/30 m ² public display	0	18
OFFICES	1/25 m ² (staff) or 1+1/4	703.963	28
	10% staff parking (visitors)		3
RESIDENTIAL	1/ unit		18
WORKSHOP	1/ 4 members (staff)		2
	1/ 5 (visitors)	150 visitors	30
ARCHIVE / DIGITAL GALLERY	1/ 3 members (staff)		1
	1/ 300 m ² (min 4)		4
STUDIOS	1/ 3 studios		5
AVAILABLE	basement		244
	on-street		118
			12

46 secure parking bays

3_AREA | INFORMATION



Area with erf numbers.

ERF ADDRESS
NO.

NAME

USAGE/FUNCT

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

DESCRIPTION

HERITAGE VALUE

high med low



1	6/73	302 Struben str.		Restaurant and sport bar	2		Two storey light grey concrete building with plastered brick infill. Pink signage covers the top floors next to concrete framed windows. Street frontages are display windows covered with roller shutter doors.	The exposed slab, eave and lintel detailing on this building's features are characteristic of the modernistic era.
2	7/73	44 Van Der Walt str.		Clothing stores	1		Steel frame building with shop fronts and roller shutter doors. Single storey with build-up parapet covered with signage.	
3	9/73	7 Struben str.		Sewing market + residential	W3, E1		Three storey concrete building with face brick infill. The concrete frame is exposed and plastered. Steetfront consists of shop fronts covered with roller shutters. First and second floor apartments with steel frame windows.	
4	6/74	11 Brown str./ 11 Struben str.		Salon, panel beaters	N2, SW4, Se1		Light industrial type concrete frame building with dark brick infill and clerestory steel frame windows. Street frontage used for delivery: roller shutter garage door sized openings.	
5	2761	23 Brown str.		Motor workshop	2		Light industrial two storey brick building, plastered and painted. Standard steel frame windows in ground floor and first floor. Roller shutter door on street level. – 1m roof overhang, monopitch corrugated iron roof.	
6	2884	336 Struben str.		Panel beaters	2		Two storey concrete frame building with dark face brick infill and steel frame shop fronts on street level. Concrete edge detailing over shop fronts and windows. Curved metal plated roof.	Although not a pleasant public building, the detailing gives it merit and potential.
7	4/75	324 Struben str.		Rebel motors with flats above	3			
8	2/75	326 Struben str.		Commercial with residential	4		Concrete frame four storey building with light and dark face brick infill. Concrete floor slabs exposed. Standard steel frame windows. Entrance to flats leads into a courtyard with parking and a communal stair up to living units. Retail street space.	
9	6/76	330 Struben str.		Motor and cycle house	1		Single storey workshop with pallsade fencing in front. Parapet with painted signage, roller shutter doors.	
10	3/78	27 Prinsloo str.	Cato Tshwane Auto body Parts	Driving school	2			



ERF ADDRESS NO.	NAME	USAGE/FUNCT	DESCRIPTION	HERITAGE VALUE					
					high	med	low		
11 8/78	35 Prinsloo str.	Fleet way Motors	Motor shop and tomb stone store	3		The concrete detailing gives the building a certain identity within the area, and is certainly something to consider in terms of a local architectural language.	high	med	low
12 R/78	43 Prinsloo str.	Transvaal Motor and Cycle House	Motor shop	2					
13 12/78	47 Prinsloo str.		African restaurant with residential flats	4					
14 9/78	344 Struben str.			4					
10/78	N/A		Servitude	N/A					
11/78	N/A		Servitude	N/A					
15 5\31	34 Van Der Walt str.		Internet cafØ	4		This concrete building is similar to the façade treatment at the international terminal of the O R Tambo airport.	high	med	low
16 R/31	6 Brown str.			4					
17 4/31	30 Van Der Walt str.		Salon	4					
3\31	28 Van Der Walt str.		Wholesale retail	2					
18 2\31	26 Van Der Walt str.		Wholesale retail	2					
19 8\32	315 Bloed str. \ 315 Brown str.		Salon	N2, S1		A distinct modern style is visible, which forms part of the greater modern movement building in Pretoria	high	med	low
20									



	ERF ADDRESS NO.	NAME	USAGE/FUNCT		DESCRIPTION	HERITAGE VALUE		
						high	med	low
21	7\32 12 Brown str.	KFC	Restaurant	N4, S2	 A concrete frame band brick infill building, plastered and painted with detail standard to the KFC Franchise.			
22	R\3\3 321 Bloed str.		Commercial	2	 Concrete frame building with shop fronts at street level and a parapet covered with signage and advertising.			
23	R\34 327 Bloed straat		Commercial	1	 Concrete building with both corner columns used as telephone points.			
24	4\33 325 Bloed str.		Salon	E2, W1				
25	3398 329 Bloed str.			3				
26	3358 335 Bloed str.		Top score butchery	N/A	 Dark face brick, brutalistic building with small clerestory opening on each floor. A cast curve concrete element covered with tiles forms the entrance canopy and on street level a curved glass façade is seen.			
27	9\35 339 Bloed str.		Spares	3	 A concrete frame building with roller shutter doors on street level and brick infill on top. The entire ground floor opens up to give the impression of a continuation of the sidewalk under the building.			
28	8\36 N/A		Servitude	N/A				
29	4\36 5 Bloed str.		Salon, Muti-market, Surgery, Motors	1	 Corner 'bazaar-type' building with precast columns in front to form a covered sidewalk which wraps around the corner with stairs that lead from the sidewalk into the shops. The corner shop has pressed ceilings.			



ERF ADDRESS
NO.

NAME

USAGE/FUNCT

DESCRIPTION

HERITAGE VALUE

high med low



	ERF ADDRESS NO.	NAME	USAGE/FUNCT		DESCRIPTION	HERITAGE VALUE
30	2\36 5 Prinsloo str.	Fleet way Motors	Motors	1	 A continuation of the corner building (on 4/36)	As above
31	3417 15 Prinsloo str.	Transvaal Motors	Motors	1	 Standard steel frame car showroom building with curved corrugated iron roof covered with signage.	
32	7\36 N/A		Servitude			
	1\37 2 Prinsloo str.		Spares	2		
33	6\37 8 Prinsloo str.		Supermarket, Spares, Gold and diamond exchange	W1, E2	 A concrete frame building set back at points from the street with a red parapet used for signage. Shop fronts at street level.	
34	79 360 Struben str.	Pearl's Restaurant and Sports Bar	Cafe, Bar, Salon	1	 Single storey building with precast round concrete columns. The building is rounded on the street corner (see R\121 on the opposite corner). Informal activity outside shop (music sellers).	Corner building of typological importance characteristic of the bazaar-era.
35	R\80 368 Struben str.	Oz	Motor parts and building material shop	1	 Concrete frame building with roof overhang detail and enclosed by palisade fencing.	
36	3054 376 Struben str.	Auto Zone	Motor parts shop	2	 Two storey concrete frame building with dark face brick infill and roller steel garage doors on street level. Concrete edge detailing over shop fronts and windows. Curved metal plated roof. Corner enclosed by palisade fencing. Motor repair activity blocking sidewalk.	
37	4/157 98 Proes str.		Butchery, Offices	4	 Four storey concrete structure with steel window frames filled in with glass and red paneling. Street level activity includes a butchery and the rest is used as office space.	
38	R/15 78 van der Walt str.		Sports Pub	4	 Four storey concrete building with exposed slabs and lintels around windows to give a distinct modernistic impression. Shop fronts at street level with standard steel frame windows at residential levels.	

ERF ADDRESS
NO.

NAME

USAGE/FUNCT


 UNIVERSITEIT VAN PRETORIA
 UNIVERSITY OF PRETORIA
 YUNIBESITHI YA PRETORIA

DESCRIPTION

HERITAGE VALUE

 high med low

39	1/15776 van der Walt str.		Linen Factory	4		Brick shed type building with corrugated iron cladding over roof edge. Sidewalk covered with canopy. Shop fronts on Street with roller shutter doors. Joint shops with merchandise in front and restaurant/eatery at back. Merchandise includes cellular phones, clothing and accessories.	
40	3059 319 van der Walt/ 319 Struben str.		Furniture/ Butchery	2		Brick shed type building with corrugated iron cladding over roof edge. Shop fronts on street with roller shutter doors. Uses include Joshua Door furniture store and Prime Butchery.	
	1/1173 27 Struben str.		Parking			Bare earth surface with random trees.	
	1/1183 31 Struben str.		Parking			Bare earth surface with random trees.	
	R/11 335 Struben str.		Parking			Bare earth surface with random trees.	
	2/1183 37 Struben str.		Parking			Bare earth surface with random trees.	
	R/11 339 Struben str.		Parking			Bare earth surface with random trees.	
	2/1193 41 Struben str.		Parking			Bare earth surface with random trees.	
41	1/1193 41 Struben str.		Parking			Bare earth surface with random trees.	
	3360 349 Struben str.		Take Away/ Trading Store	2		Concrete frame building with shop fronts at street level. Corrugated iron roof detail painted red and white gives the building a distinct postmodern quality.	
42	R/16 79 Prinsloo str.		Parking			Bare earth surface with random trees.	
	2/162 91 Prinsloo str.		Parking			Bare earth surface with random trees.	
	1/1623 44 Proes str.		Parking			Bare earth surface with random trees.	
43	R/16 340 Proes str.		Parking			Bare earth surface with random trees.	
	3060 332 Proes str.	Justice College	Academic institute.	4		Four storey symmetrical building, lifted on column 'fins' with cantered edges. Three rows skew steel frame windows on either side of the central entrance, covered with mosaic tiles. West of the main building is an open staircase with half rounded concrete wall. In the north a six level, L-shaped building with piloti, painted concrete, mosaic and steel frame windows. The focus is on the horizontality of the windows and bays. The buildings are centrally set in landscaped green spaces.	Architect Brian Sandrock's Pretorian Modernism is apparent in this building. (Date: 1959)
44	R/16 84 Prinsloo str.		Cash Loans/Tombstones/Clothing/Salon/Herbal/Bottle store/ Confidence College	4		Face brick building with standard iron frame windows. Street front usage include a cash loans centre and Scorpion Legal Protection services. Rest of building is used for the Confidence College, with entrance located on street level.	The red window frame detailing and façade treatment on this building gives it a distinct post-modern identity, and greatly contributes to the overall identity of the area.
45							

ERF ADDRESS
NO.

NAME

USAGE/FUNCT

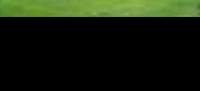
UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

DESCRIPTION

HERITAGE VALUE
high med low

46	R/12 855 Prinsloo/ 355 Struben str.	Sportsman's Bottle store	Bottle store/ Insurance Centre	2		A double storey building rounded around the street corner with precast columns. The first floor is set back. Typologically important corner design, with cantilevered verandas over the sidewalk. Informal activity on sidewalk.	Corner building of typical importance, characteristic of the bazaar-era.
47	R/1/ 22 385 Struben str.		Driving School	3		Concrete frame building with exposed, plastered and painted slabs and lintels. Exposed eave detailing. Standard industrial steel frame windows. Building is set back from the street to provide parking.	
48	3478 378 Struben/ 378 Shepherd str.		Taxi Parking			Open site fenced off with palisade fencing and partially covered with trees.	
49	R/1/ 23 383 Struben str.	Glory Christian Centre	Church	2		Steel frame shed type building with tinted glass façade. Enclosed by palisade fencing.	
50	3/12 385 Struben str.		Residential	4		Concrete frame building with steel frame windows and an exposed coffer roof on first floor level. The façade is interestingly stepped to give more depth. The building is enclosed by palisade fencing.	
51	3226 395 Struben str.		Industrial building	3		Industrial type concrete frame building with steel frame clerestory windows and interesting steel covered column details.	
52	4/12 451 Du Toit str.		Christian Centre	2		Concrete frame building with a potentially useful public entrance area. The brick infill is of both light and dark face bricks. Concrete detailed overhangs form balconies on first floor level and wrap around the corner. The building is enclosed by palisade fencing.	The corner overhang treatment is important. The fact that the building is closed off from the public is a problem.
53	3/12 Corner of Struben and Du Toit str.			Empty			



ERF ADDRESS NO.	NAME	USAGE/FUNCT			DESCRIPTION	HERITAGE VALUE			
						high	med	low	
54 R/2/1 68	79 Du Toit str.		Children's Church Ministry/Carburator Store	1		A concrete frame building with corrugated iron parapet detailing. Shop fronts on street level.			
55 1/1688	Du Toit str.			1		A brick structure with tiled pitch roof and parapet used for signage. Windows on street level used for advertising.			
56 6/168	398 Du Toit/ 398 Proes str.		Liquor Store	1		A concrete frame building with corrugated iron parapet detailing. Shop fronts on street level.			
57 R/167	386 Proes str.		Dry Cleaners	1		Standard concrete frame building. Advertising and signage on corrugated iron parapet.			
58 3234	377 Shepherd str.		Audio Car Fitment Centre/ Supermarket/Bunnins	2		Brick covered concrete structure with enlarged corrugated iron parapet and one entrance into shop. No shop fronts on street level.			
59 R/164	367 Proes str.		Audio Centre	1		Curved roof detail of this concrete structure consists of a timber beam holding up a corrugated iron roof. The façade is filled in with industrial styled clerestory windows.	The detailing on this building is well maintained and can form a strong identity node for the area.		
60 R/22		Tshwane University of Technology (TUT) Arts Campus	University	1 or 2		Single and double storey brick administration buildings and prefabricated classrooms. Large green spaces next to the Apies River, currently used as parking area.			



bibliography

1. FILMOGRAPHY	[02]
2. READING LIST	[03]
3. CITATION LIST	[09]
4. IMAGE REFERENCES	[11]



1_FILMOGRAPHY

Waking Life, 2001.

Director: Richard Linklater

The film expresses the crossing of boundaries of different artistic genres.

The Pillow Book, 1996

Director: Peter Greenaway

The film is a visually rich expression of the use of text (calligraphy) on a living surface, the skin. The movie portrays how text can be used to cross and transform cultural boundaries.

(Pi - Faith in Chaos), 1998

Director: Darren Aronofsky

The main character in this film theorizes that everything in nature can be understood through numbers and through universal patterns found in nature. He believes that everything is connected; that beneath random behaviour there is an underlying order. 'Paranoia is faith in a hidden order behind the visible'.



2_READING LIST

Books:

- ALEXANDER, C. et al. 1977. A Pattern Language: Towns, Buildings, Construction. New York: Oxford University Press.
- BELL, D. & JAYNE, M. 2004. City of Quarters: Urban Villages in the Contemporary City. England: Ashgate.
- BRAND, S. 1994. How Buildings Learn: What happens after they're built. USA: Penguin Books.
- BRONOWSKI, J. 1973. The Ascent of Man. England: London and Eastleigh.
- CHING, F. & ADAMS, C. 2001. Building Construction Illustrated. 3rd ed. USA: John Wiley & Sons, Inc.
- COOK, P. & RAND, G. 1989. Morphosis: Buildings and Projects. New York: Rizzoli International Publications, Inc.
- CORNER, J. 1999. Recovering Landscape: essays in contemporary landscape architecture. USA: Princeton Architectural Press.
- ECO, U. 1986. Travels in Hyperreality. Translated by W. Weaver. USA: Harcourt Brace Jovanovich.
- EVANS, G. 2001. Cultural Planning: An Urban Renaissance? London: Routledge.
- GEHL, J. & GEMZOE, L. 2003. New city spaces. 3rd ed. Copenhagen: The Danish architectural press.
- HARRIES, K. 1997. The Ethical Function of Architecture. Cambridge: MIT Press.
- KOOLHAAS, R., HARVARD, BOERI, S., KWINTER, S et al. 2001. Mutations. France: ACTAR.
- KOSTOF, S. 1991. The City Shaped: Urban Patterns and Meanings through History. London: Thames & Hudson.
- KRONENBURG, R. 2007. Flexible: Architecture that Responds to Change. London: Laurence King Publishing.
- LANDRY, C. 2000. The Creative City: A Toolkit for Urban Innovators. USA: Earthscan.
- LOOTSMA, B. 2000. Superdutch: New Architecture in the Netherlands. The Netherlands: Thames & Hudson.
- LYNCH, K. 1960. The Image and the City. USA: The MIT Press.
- MVRDV. 2005. MVRDV, KM3: Excursions on Capacities. European Union: Actar.
- OJEDA, O. R. & PASNIK, M. 2003. Materials: architecture in details. USA: Rockport Publishers.
- PIENAAR, M. 2004. Reci-Pro-City. March (Prof) Thesis. University of Pretoria.



- RIEWOLDT, O. 2002. *New Hotel Design*. Great Britain: Laurence King.
- SCHITTICH, C. 2006. *In Detail: Building Skins*. Basel: Birkhauser.
- SCHMIDT, P., TIETENBERG, A. & WOLLHEIM, R. 2007. *Patterns in Design, Art and Architecture*. Basel: Birkhauser.
- SIMONE, A. & ABOUHANI, A. 2005. *Urban Africa: Changing contours of survival in the city*. London: Zed Books and Pretoria: UNISA.
- STEVENSON, D. 2003. *Cities and Urban Cultures*. Philadelphia: Open University Press.
- TRANCIK, R. 1986. *Finding Lost Space*. USA: Van Nostrand.
- TSCHUMI, B. 2000. *Event Cities 2*. Cambridge: MIT Press.
- VAN EEDEN, J. & DU PREEZ, A. 2005. *South African Visual Culture*. Pretoria: Van Schaik Publishers.
- WESTON, R. 2003. *Materials, Form and Architecture*. USA: Yale University Press.

Articles:

- APPLEYARD, D. 1983. Streets Can Kill Cities: Third World Beware. *Habitat Intl*. Vol. 7, no. 3 /4, p. 111-122.
- BESTER, R. 2007. Showing here, showing there. *Art South Africa*. Autumn 2007, vol. 05, issue 03, p.23-25.
- BOHIGAS, O. Unknown. Ten Points for an Urban Methodology. Reproduction, Pretoria, 2004
- BOKERN, A. 2005. Museum Tour. *Frame*. Nov/Dec 2005, issue 47, p. 48.
- BUCHANAN, P. 2006. Beyond the Cult of the Compelling Object: a New Epoch. *Architecture South Africa*. July/August 2006, p.12-13.
- CRANE, D. 1960. The City Symbolic. *JA*. November 1960, vol. 26, no. 4, p. 280-293.
- CRANE, D. 1960. The Dynamic City. *Architectural Record*. April 1960, p. 58-62.
- CULHANE, D. 2007. X marks the spot. *one small seed*. June/ July/ August, issue 07, p.149-155.
- GREENBERG, K. 2007. Mapping creativity: on the creative economy. *Art South Africa*. Autumn 2007, vol. 05, Issue 03, p.19.



- GROTH, P. 1981. Streetgrids as Frameworks for Urban Design. *Harvard Architectural Review*. Spring 1981, vol. 2, p.68-75.
- KAHN, A. 1995. Constructing Knowledge of the Urban Site. *ACSA European conference*. (1995:Lisbon). p.199-201.
- KIRATZIDIS, D. & HOFMEYER, A. 2007. Urban Pay. *A Look Away*. Quarter 1, 2007, issue 4, p. 37-39.
- KIRATZIDIS, D. & HOFMEYER, A. 2007. Urbanplaymobile: approaching a built reality. *Innovate*. 2007, issue 2, p. 66-70.
- MERVIS, J. 2006. Cape is the buzzword. *one small seed*. January-March, issue 02, p. 14-17.
- NOVAK, M. 1995. Architects in Cyberspace: Transmitting Architecture. *Architectural Design*. November-December 1995. vol. 65, no. 11/12, p. 43-47.
- PALLASMAA, J. 2000. Hapticity and Time: notes on fragile architecture. *Architectural Review*. May 2000, vol. 207, p. 78-84.
- PALLASMAA, J. 2001. Critique: Our image culture and its misguided ideas about freedom. *Architectural Record*. January 2001, no. 01, p. 51-52.
- PEARSON, C.A. 2003. Bernard Tschumi: the FIU School of Architecture. *Architectural Record*. October 2003, vol. 191, p. 102-107.
- PETERSON, S. 1979. Urban Design Tactics. *Architectural Design*. March/April 1979, vol. 49, p.76-81.
- SLESSOR, C. 2000. Containment Strategy. *Architecture*. Feb 2000, vol. 89, no. 2, p. 60-69.
- SOWA, A. 2000. Coproductions: Students Center, Lerner Hall, Universite. *Arch, d'Aujourd'hui*. Aug 2000, vol. 329, p. 60-65.
- THACKARA, J. 2002. Deep Planning. *Domus*. October 2002, vol. 190, p. 128-237.
- TSCHUMI, B. 2002. Demandez le programme! *Arch, d'Aujourd'hui*. April 2002, vol. 339, p. 38-43.
- WERTHEIM, C. 1996. Games of Architecture: S PACE. *Architectural Design*. May-June 1996. vol. 66, no. 5/6, p. 79-83.



Frameworks:

CAPITOL CONSORTIUM. 1999. Pretoria Inner City ISDF. Reproduction, Pretoria, 2004.

CITY OF TSHWANE. Metropolitan Municipality Department Housing, City Planning & Environmental Management. 2004. Tshwane Metropolitan Profile: A Compendium of Planning Information. www.tshwane.gov.za (10 March 2007).

CITY OF TSHWANE. 2005. Tshwane Inner City Development and Regeneration Strategy. Electronic reproduction, Pretoria, 2007.

CITY OF TSHWANE. 2007. City of Tshwane Spatial Development Strategy: 2010 and Beyond. www.tshwane.gov.za (10 March 2007).

Lectures:

PIENAAR, M. 2007. Lecture: Urban layout of Pretoria. 26 April 2007.

JOUBERT, O. 2007. Lecture: Area vs. Space. 5 September 2007.

Interviews:

Vermooten, K. Civil engineer. 13 June 2007.

Von Geyso, K. Structural engineer. 7 and 14 September 2007.



Internet:

Ag4. Mediamesh/Illumesh. www.creativeweave.com (19/06/2007).

ARCSPACE. 2003. Lab architecture studio: Federation Square. www.arcspace.com/architects/Lab/lab_features.html (23/07/2007).

ARTS AND CULTURE TRUST. www.act.org.za (10/03/2007).

ATELIER. 2002. Concept Design. [Atelier.k3.mah.se/publications/D4_Concept_Design.pdf](http://atelier.k3.mah.se/publications/D4_Concept_Design.pdf) (13/05/2007).

CAPE. 2007. www.capeafrica.org (13/05/2007).

CONTEXT. Sampling new cultural context. www.straddle3.net (13/05/2007).

CRIST, G. Urbanity and federation. www.architectureaustralia.com/aa/aaissue.php?issueid=200303&article=7&typeon=2 (23/07/2007).

DAVIE, L. 2002. Walter Sisulu Square: the winner's design. www.joburg.org.za/oct2002.htm (28/09/2006).

HARTOONIAN, G. The Tectonic of Camouflage. www.architectureaustralia.com/aa/aaissue.php?issueid=200303&article=7&typeon=2
(23/07/2007).

IDENSEN, H. 2007. Poetry should be made by all: From hypertext utopias to cooperative net-projects.

www.hyperdis.de/txt/alte/htutopia/kollab.htm#interfacing (23/07/2007).

MACARTHUR, J. Federation Square: The Aesthetics of Public Space.

www.architectureaustralia.com/aa/aaissue.php?issueid=200303&article=7&typeon=2 (23/07/2007).

MCCANN, R. 2005. On the Hither Side of Depth: An Architectural Pedagogy of Engagement. www.arch.ksu.edu.htm (10/09/2006).

MERCHANT, C. 1992. Genesis of Eden Diversity Encyclopaedia: Radical Ecology. www.dhushara.com/book/renewal/voices2/recol.htm
(28/04/2006).

PLEINMUSEUM. The new museum as a travelling chameleon. www.pleinmuseum.nl (02/06/2007).

REALITIES:UNITED. 2005. Design, strategy and outlook for SPOTS media and light installation as an extension of architecture.

www.realities-united.de/download/pdf_doc/051212_SPOTS_ArchStatement-D.doc (02/06/2007).



-
- REYNOLDS, P. 1984. 'Just plain folks' building culture, rather than just consuming it. Art and Ceremony In Sustainable Culture. <http://www.context.org/ICLIB/IC05/Reynolds.htm> (13/05/2007).
- SALINGAROS, N. A. 2003. Connecting the Fractal City. www.math.utsa.edu/sphere/salingar/connecting.html (13/05/2007).
- SAUTER, J. Das vierte Format: Die Fassade als mediale Haut der Architektur: Digitale Transformationen. <http://netzspannung.org/cat/servlet/CatServlet?cmd=netzkollektor&subCommand=showEntry&entryId=257044&lang=de> (18/10/2007).
- SOUTH AFRICA. Department of Arts and Culture. www.dac.gov.za (10/03/2007).
- Spots Installation www.spots-berlin.de (02/06/2007).
- STANHOPE, Z. The Art of a Building a Building for Art. www.architectureaustralia.com/aa/aaissue.php?issueid=200303&article=7&typeon=2 (23/07/2007).
- TSCHUMI, B. Bernard Tschumi Architects. www.tschumi.com/home.asp. (23/07/2007).
- URBAN SCREENS. The potential of screens for urban society. www.urbanscreens.org (02/06/2007).
- VARNELIS, K. 2007. The Rise of Network Culture. http://varnelis.net/the_rise_of_network_culture (13/05/2007).



3_CITATION LIST

- ALEXANDER, C. et al. 1977. *A Pattern Language: Towns, Buildings, Construction*. New York: Oxford University Press.
- ATELIER. 2002. *Concept Design*. [Atelier.k3.mah/se/publications/D4_Concept_Design.pdf](#) (13/05/2007).
- CAPE. 2007. www.capeafrica.org (13/05/2007).
- CAPITOL CONSORTIUM. 1999. *Pretoria Inner City ISDF*. Reproduction, Pretoria, 2004.
- CITY OF TSHWANE. 2005. *Tshwane Inner City Development and Regeneration Strategy*. Electronic reproduction, Pretoria, 2007.
- CONTEXT. *Sampling new cultural context*. www.straddle3.net (13/05/2007).
- COSGROVE, D. 1999. *Liminal Geometry and Elemental Landscape: Construction and Representation*. Chapter 7: *Recovering Landscape: essays in contemporary landscape architecture*. USA: Princeton Architectural Press.
- ECO, U. 1986. *Travels in Hyperreality*. Translated by W. Weaver. USA: Harcourt Brace Jovanovich
- EVANS, G. 2001. *Cultural Planning: An Urban Renaissance?* London: Routledge.
- GEHL, J. & GEMZOE, L. 2003. *New city spaces*. 3rd ed. Copenhagen: The Danish architectural press.
- GROTH, P. 1981. *Streetgrids as Frameworks for Urban Design*. *Harvard Architectural Review*. Spring 1981, vol. 2, p.68-75.
- HARRIES, K. 1997. *The Ethical Function of Architecture*. Cambridge: MIT Press.
- KAHN, A. 1995. *Constructing Knowledge of the Urban Site*. *ACSA European conference*. (1995:Lisbon). p.199-201.
- KOSTOF, S. 1991. *The City Shaped: Urban Patterns and Meanings through History*. London: Thames & Hudson.
- KRONENBURG, R. 2007. *Flexible: Architecture that Responds to Change*. London: Laurence King Publishing.
- LANDRY, C. 2000. *The Creative City: A Toolkit for Urban Innovators*. USA: Earthscan.
- LYNCH, K. 1960. *The Image and the City*. USA: The MIT Press.
- MCCANN, R. 2005. *On the Hither Side of Depth: An Architectural Pedagogy of Engagement*. www.arch.ksu.edu.htm (10/09/2006).
- MERVIS, J. 2006. *Cape is the buzzword*. *one small seed*. January–March, issue 02, p. 14-17.
- MVRDV. 2005. *MVRDV, KM3: Excursions on Capacities*. European Union: Actar.
- NOVAK, M. 1995. *Architects in Cyberspace: Transmitting Architecture*. *Architectural Design*. November–December 1995. vol. 65, no. 11/12, p. 43-47.



- PALLASMAA, J. 2000. Hapticity and Time: notes on fragile architecture. *Architectural Review*. May 2000, vol. 207, p. 78-84.
- PALLASMAA, J. 2001. Critique: Our image culture and its misguided ideas about freedom. *Architectural Record*. January 2001, no. 01, p. 51-52.
- PEARSON, C.A. 2003. Bernard Tschumi: the FIU School of Architecture. *Architectural Record*. October 2003, vol. 191, p. 102-107.
- PIENAAR, M. 2007. Lecture: Urban layout of Pretoria. 26 April 2007.
- PIETRSE, E. 2005. At the limits of possibility: working notes on a relational model of urban politics. Chapter 6: Urban Africa: Changing contours of survival in the city. London: Zed Books and Pretoria: UNISA.
- REALITIES:UNITED. 2005. Design, strategy and outlook for SPOTS media and light installation as an extension of architecture. www.realities-united.de/download/pdf_doc/051212_SPOTS_ArchStatement-D.doc (02/06/2007).
- RIEWOLDT, O. 2002. *New Hotel Design*. Great Britain: Laurence King.
- SALINGAROS, N. A. 2003. Connecting the Fractal City. www.math.utsa.edu/sphere/salingar/connecting.html (13/05/2007).
- SIMONE, A. & ABOUHANI, A. 2005. *Urban Africa: Changing contours of survival in the city*. London: Zed Books and Pretoria: UNISA.
- STEVENSON, D. 2003. *Cities and Urban Cultures*. Philadelphia: Open University Press.
- TRANCIK, R. 1986. *Finding Lost Space*. USA: Van Nostrand.
- TSCHUMI, B. 2000. *Event Cities 2*. Cambridge: MIT Press.
- TSCHUMI, B. Bernard Tschumi Architects. www.tschumi.com/home.asp. (23/07/2007).
- VAN EEDEN, J. & DU PREEZ, A. 2005. *South African Visual Culture*. Pretoria: Van Schaik Publishers.
- VARNELIS, K. 2007. The Rise of Network Culture. http://varnelis.net/the_rise_of_network_culture (13/05/2007).



4_IMAGE REFERENCES

All images by the author, unless noted otherwise.

- fig 1.1 Sketch (edited, Context)
- fig 1.2 Collage: city of layers (edited, CONTEXT image as background, and own images)
- fig 1.3 The four modes of representation (edited, SAUTER, J.)
- fig 1.4 Collage: the amateur (edited, CONTEXT image as background, and own images)
- fig 1.5 Department of Arts and Culture (www.dac.gov.za)
- fig 1.6 The study area in Pretoria.

- fig 2.1 Cities with populations over 1 million (World Urbanization Prospects, United Nations, 2003)
- fig 2.2 South Africa
- fig 2.3 Gauteng
- fig 2.4 Tshwane
- fig 2.5 Tshwane nollu map
- fig 2.6 Pretoria at the heart of Tshwane
- fig 2.7 Pretoria and study area
- fig 2.8 Pretoria and study area
- fig 2.9 Pretoria: city of layers
- fig 2.10 Grid system in Pretoria
- fig 2.11 Cultural landmarks in Pretoria
- fig 2.12 Cultural network systems
- fig 2.13 Pedestrian network in the northern area of Pretoria
- fig 2.14 Site position in Pretoria
- fig 2.15 The site
- fig 2.16 Panoramic view of the Pretoria skyline from Munotoria (photo)
- fig 2.17 The site within Pretoria (photo)
- fig 2.18 Site from Prinsloo Street (photo)
- fig 2.19 Panoramic view of the Pretoria skyline from the TUT Arts Campus (photo: study group 2007)
- fig 2.20 Dr. Savage Street taxi rank (photo)
- fig 2.21 Dr. Savage Street Gateway (photo)
- fig 2.22 Site legibility
- fig 2.23 The dissipation of the city grid
- fig 2.24 Usage on ground floor
- fig 2.25 Site usage (3d by Marc Jooste)
- fig 2.26 TUT Campus usage (3d by Marc Jooste)
- fig 2.27 Struben Street usage (3d by Marc Jooste)
- fig 2.28 Prinsloo Street usage (3d by Marc Jooste)
- fig 2.29 Usage above ground floor
- fig 2.30 Vehicular movement
- fig 2.31 Pedestrian movement
- fig 2.32 New links
- fig 2.33 SWOT analysis
- fig 2.34 Building facades on Struben Street, southern side (photo by M. Jooste)
- fig 2.35 Unfriendly sidewalk (photo)
- fig 2.36 Garbage collection point on site (photo)
- fig 2.37 Building facades on Struben Street, northern side (photo by M. Jooste)
- fig 2.38 Unfriendly sidewalk (photo)
- fig 2.39 Motor repairs on sidewalk (photo)
- fig 2.40 Site corner (photo)
- fig 2.41 Site corner (photo)
- fig 2.42 Vandalized London Plane tree trunk (photo)
- fig 2.43 Building facades on Du Toit Street, western side (photo by M. Jooste)
- fig 2.44 TUT boundary wall (photo)
- fig 2.45 London Plane Tree lined Du Toit Street (photo)
- fig 2.46 Movement vectors on site
- fig 2.47 Aerial photo (gis.tshwane.gov.za, 24/05/2007)
- fig 2.48 Rhizome structure
- fig 2.49 CAPE (edited, CULHANE, D. 2007. X marks the spot. one small seed. June/ July/ August, issue 07, p.149)



- fig 2.50 CAPE07 exhibition (CULHANE, D. 2007. X marks the spot. one small seed. June/ July/ August, issue 07, p.154-155.)
- fig 3.1 Wood and steel, nature and culture. Finnish Pavilion, Seville, 1990 (WESTON, R. 2003. Materials, Form and Architecture: 178)
- fig 3.2 Pessac workers' housing, Le Corbusier, 1925 (WESTON, R. 2003. Materials, Form and Architecture: 66)
- fig 3.3 Unable to deal with the effects of time, Modernist building weather badly (WESTON, R. 2003. Materials, Form and Architecture: 118)
- fig 3.4 Peripheral vision found in the Finnish Pavilion, New York, designed by Alvar Aalto in 1939 (STOLLER, E. <http://www.morehousegallery.com/artists/Ezra-Stoller/191.aspx>)
- fig 3.5 Movement vectors on site
- fig 3.6 First concept model & sketches
- fig 3.7 Development of building clusters
- fig 3.8 Ground floor plan
- fig 3.9 Elevational study on Struben Street
- fig 3.10 Concept sketch
- fig 3.11 Section through the southern wing, first concept
- fig 3.12 Concept elevation sketches
- fig 3.13 Three dimensional study of the corner, first concept
- fig 3.14 Sketch of an event generator within a central public space (TSCHUMI, B. 2000. Event Cities 2: 595)
- fig 3.15 Walkways connecting buildings at the FIU School (PEARSON, C.A. 2003. Bernard Tschumi: the FIU School of Architecture. Architectural Record. October 2003, vol. 191, p. 103)
- fig 3.16 Marne-la-Vallée School layout. Internal public space covered with glass roof
- fig 3.17 Flexible studio space with mezzanine level (PEARSON, C.A. 2003. Bernard Tschumi: the FIU School of Architecture. Architectural Record. October 2003, vol. 191, p. 107)
- fig 3.18 FIU School. Internal public space open
- fig 3.19 Sketch of 'generator' (TSCHUMI, B. 2000. Event Cities 2: 594)
- fig 3.20 Walkways connecting buildings (PEARSON, C.A. 2003. Bernard Tschumi: the FIU School of Architecture. Architectural Record. October 2003, vol. 191, p. 103)
- fig 3.21 View of central lecture hall; a 'generator', which is a melting pot of cultures (PEARSON, C.A. 2003. Bernard Tschumi: the FIU School of Architecture. Architectural Record. October 2003, vol. 191, p. 104)
- fig 3.22 Plan diagram
- fig 3.23 Levels of participation in art events
- fig 3.24 Ground floor plan, 16 June 2007 concept
- fig 3.25 Ground floor plan, 7 July 2007 concept
- fig 3.26 Ground floor plan, 13 August 2007 concept
- fig 3.27 Ground floor plan, 28 August 2007 concept
- fig 3.28 Concept sketch (16 June 2007)
- fig 3.29 Concept sketch (7 July 2007)
- fig 3.30 Concept sketch (13 August 2007)
- fig 3.31 Concept sketch (28 August 2007)
- fig 3.32 The shopping event space (OJEDA, O. R. & PASNIK, M. 2003. Materials: architecture in details: 158-159)
- fig 3.33 Building layers of change (Edited from BRAND, S. 1994. How Buildings Learn: What happens after they're built: 13)
- fig 3.34 Street entrance, Matsumoto (KRONENBURG, R. 2007. Flexible: Architecture that Responds to Change: 82)
- fig 3.35 Ramped staircase, Matsumoto (KRONENBURG, R. 2007. Flexible: Architecture that Responds to Change: 82)
- fig 3.36 Movable elements within the space; sketch of the plan layout, Matsumoto (background from KRONENBURG, R. 2007. Flexible: Architecture that Responds to Change: 85)
- fig 3.37 Investigation sketches of service core layouts
- fig 3.38 Modular plan layout, Pompidou Centre
- fig 3.39 Section, Pompidou Centre
- fig 3.40 Mediamesh screen (AG4. Mediamesh/Illumesh: 3)
- fig 3.41 Model of the transformable white cube, Pleinmuseum (PLEINMUSEUM. The new museum as a travelling chameleon)
- fig 3.42 Elevation, Pleinmuseum (PLEINMUSEUM. The new museum



- as a travelling chameleon)
- fig 3.43 The 'chameleon' museum, Pleinmuseum (PLEINMUSEUM. The new museum as a travelling chameleon)
- fig 3.44 Movable screen elements (KRONENBURG, R. 2007. Flexible: Architecture that Responds to Change: 172)
- fig 3.45 Program investigation, UrbanPlayMobile (KIRATZIDIS, D. & HOFMEYER, A. 2007. Urban Pay. A Look Away. Quarter 1, 2007, issue 4, p. 37)
- fig 3.46 Elevation sketches, UrbanPlayMobile (KIRATZIDIS, D. & HOFMEYER, A. 2007. Urbanplaymobile: approaching a built reality. Innovate. 2007, issue 2, p. 68)
- fig 3.47 SPOTS, Potsdamer Platz, Berlin (Spots Installation www.spots-berlin.de)
- fig 3.48 Core vs. skin layout (MVRDV. 2005. KM3: Excursions on Capacities: 794)
- fig 3.49 Section (MVRDV. 2005. KM3: Excursions on Capacities: 796)
- fig 3.50 Media Galaxy plan layout sketches
- fig 4.1 Sketch of final plan layout
- fig 4.2 Movement patterns shaping the square
- fig 4.3 Movement patterns through the square
- fig 4.4 Facade geometries
(www.photoeverywhere.co.uk/east/melbourne/slides/federation_square/0/0878.jpg)
- fig 4.5 The experiential qualities of interior spaces
(www.interfaceflor/flor/community/images/articles.jpg)
- fig 4.6 The use of screens in the public square
(www.afterdark.com.au/back-pk/melb/melb_fed.jpg)
- fig 4.7 Ground floor plan
- fig 4.8 First floor plan
- fig 4.9 Second floor plan
- fig 4.10 Third floor plan
- fig 4.11 Fourth floor plan
- fig 4.12 Sketch of southern elevation
- fig 4.13 South elevation on Struben Street
- fig 5.1 The Structure
- fig 5.2 Concrete column shape investigation
- fig 5.3 The eastern wing
- fig 5.4 The southern wing
- fig 5.5 The floors of the corner building
- fig 5.6 Cantilevered concrete walkway
- fig 5.7 Exhibition hall of Congrexpo, France by Office for Metropolitan Architecture
- fig 5.8 (WESTON, R. 2003. Materials, Form and Architecture. USA: Yale University Press, p. 34)
- fig 5.9 (WESTON, R. 2003. Materials, Form and Architecture. USA: Yale University Press, p.95)
- fig 5.10 (OJEDA, O. R. & PASNIK, M. 2003. Materials: architecture in details. USA: Rockport Publishers, p.22)
- fig 5.11 (OJEDA, O. R. & PASNIK, M. 2003. Materials: architecture in details. USA: Rockport Publishers, p.163)
- fig 5.12 (WESTON, R. 2003. Materials, Form and Architecture. USA: Yale University Press, p.148)
- fig 5.13 (WESTON, R. 2003. Materials, Form and Architecture. USA: Yale University Press, p. 132)
- fig 5.14 (WESTON, R. 2003. Materials, Form and Architecture. USA: Yale University Press, p. 106)
- fig 5.15 TecCrete floor tile (www.net-floor.com)
- fig 5.16 Fixed mesh screen (OJEDA, O. R. & PASNIK, M. 2003. Materials: architecture in details. USA: Rockport Publishers, p.85)
- fig 5.17 Sliding screen facade (www.luxalon.com)
- fig 5.18 (www.medienfassaden.com)
- fig 5.19 (www.medienfassaden.com)
- fig 5.20 Images fragmented into pixels (www.medienfassaden.com)
- fig 5.21 Circulation through building
- fig 5.22 Ventilation and lighting in south wing
- fig 5.23 Acoustics in the media room and multipurpose hall