

Sensory Architecture_ Beyond Appearances

The relationship between the senses and space.

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flavoured urban fabric



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yond Appearances | ii

textured touch



impulses of odour



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yond Appearances | iv

bustling sporadic

hummmm



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Abstract_

“We shape our buildings: thereafter they shape us.” (Churchill 1940, cited in McLuhan 1995, p.62) In the same manner; we have shaped our cities, and accordingly they have shaped our lifestyles into bustling hubs of activity. Networks of roads and trails direct movement with dense high rise structures defining space. The Interior Architect enters this complex scene to become part of a duet rather than a solo, working within existing structural skins and initiating harmony between the desired new and the existing. The aim is to restore a “sense of place” within the existing city fabric through processes of restoration, renovation, preservation and adaptive re-use, extending a building’s lifetime, while preserving its history and character.

The objective of this thesis is to propose a way of improving the experience of the public domain within the inner city of Pretoria. A series of communal spaces is proposed that will provide essential public amenities within the city. These interventions guide experience via the senses.

The partially abandoned Transvaal Provincial Administration (TPA) building is selected as study area. The intervention is proposed to enable the building to realise a new era in its lifetime by acknowledging it and celebrating it as a modern icon within Pretoria’s Central Business District (CBD) while, at the same time, helping it to shed itself of its negative political association. This is proposed through the adaptive re-use of the structure to accommodate various functions including a conference facility and a new home for Pretoria’s Art Association.

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CHAPTER

Background



This chapter provides general background information about the thesis subject matter, the selected site and other influencing factors.



[1] Background

1.1 Introduction_

Pretoria, once acclaimed as the capital administration city, held the heartbeat of South Africa's previous dispensation. Currently it is characterised by an underutilised urban core. The political power associated with the city centre has shifted to its perimeter. The majority of the population is also living on the outskirts of the city, either in mono-functional suburbs and gated communities or in the historically disadvantaged township settlements.

Posel (1998, pp. 236-247) observed that "a glance at the map of Pretoria city centre in the mid-1970 suggests more than a third of the buildings were occupied by state departments." This predominant presence of the previous government in the inner city of Pretoria has branded the city as a historic symbol. Internal political strife and cultural prejudice against this symbol have paved the way for the present unbalanced polycentric economic system. The gradual emigration from the inner city to the eastern suburbs after the 1994 election have left governmental, public and private sector buildings partially abandoned. These abandoned structures need to be reinterpreted urgently.

Uncovering some of the layers of history, cultural significance and individual memories rooted in the subconscious sensory experiences of several of the city dwellers, can assist in the proposed reinterpretation and lead to city rejuvenation. Through this thesis I propose that city rejuvenation can be initiated by the improvement of the public sector. The introduction of better public amenities and facilities, which are civic in nature, is suggested. It is with this in mind that the governmental TPA building is selected for reinterpretation as an inviting civic building which will fulfil various functions which include a conference facility and a new home for Pretoria's Art Association.

Lynch (1992, p.1) states that every instant in the city represents more than what the eye can see or what the ear can hear. Every setting is waiting to be more deeply explored. Nothing is experienced in isolation, but always in relation to its surroundings. The sequence of events leading up to the experience represent the memories of the past. Consequently, this reinterpretation of the TPA building will introduce the new with respect for the presence of the past.

1.2 Problem statement_

A design problem can be defined as an undesirable condition which one aspires to alter through a design intervention.

The underutilised state of abandoned buildings within Pretoria's CBD can be classified as such a condition. These vacant structures lead to the gradual stagnation and deterioration of the city fabric. Not only do these buildings rapidly deteriorate, they also become inviting vacuums for negative elements to enter the city and further enhance the perception of the city being a dangerous place.

This thesis is concerned with the following problem: Can the insertion of multi-sensory design elements play a rejuvenating role in a building of which the life line has been severed?

1.3 Dissertation topic_

This dissertation is an investigation into the possible adaptive re-use of the TPA building, a significant structure in Tshwane inner city, as a public building housing different functions including a convention centre and a new home for the Arts Association of Pretoria.

1.4 Research Question_

Can sensory experiences be measured and improved in an existing building? If so, by what means?

Can design with a multi-sensory objective improve spatial experience?

How does one adapt a governmental building with a private nature to accommodate multiple programs with varying degrees of public interfaces?

How can one activate a lifeless street front and improve its sense of place?

1.5 Choice of site_ TPA building.

The Transvaal Provincial Administration (TPA) building on the corner of Pretorius and Bosman Street is selected as the proposed study area for this interior architecture thesis. The dissertation investigates the possible adaptive re-use of this significant structure in the inner city of Tshwane to function as a public building.



Fig. 1.5.1 Perspective of the Transvaal Provincial Administration building by H. Meiring c.1955



Fig. 1.5.2 Aerial image of Pretoria centred on Church Square.

The building complex which housed the former seat of government administration was designed by Meiring & Naudé in association with Moerdyk & Watson and was constructed from 1955 to 1963 (Transvaal Provincial Government 1963, p.5). The building's design originates from Afrikaner Nationalism and Apartheid ideology. It represents the regional mutation of Modernist thought in design which took prevalence in Pretoria's architectural circles in the forties and fifties (Gerneke 1998, p. 211).

In true Modernist fashion, the TPA building is visually biased. Bloomer and Moore (1977, p. 32) explain that this visual dominance found in Modernism is symptomatic of the intellectual prejudice found in European academies, derived from Platonic thought. Plato exalted the sense of sight above all the other bodily senses to discover the purest medium of knowledge to create perfect forms. This thesis, together with the design intervention, strives to be the antidote to the TPA's strong visual language.

The TPA building complex displays incredible attention to detail indicating a high standard of architectural design. It is one of the best civil buildings built at that time in South Africa, bearing witness to the incorporation of some of the newest technologies found in the late sixties.

The current neglected state of the TPA building can be attributed to the gradual evacuation of the building, following the Gauteng Provincial Government's relocation to Johannesburg in 1996. The building's strong reference to the previous government's rule labelled it as an unfavourable historic symbol. This has led to the building's underutilised state, fluctuating between 10% and 15% occupation over the last thirteen years (Tshwane Municipality 2005).

Architecturally, the TPA building remains a prime example of a Modernist civic building. As stated by Zumthor (1998, p.17) every new work of architecture intervenes in a specific historical situation. Therefore it is essential that the quality of the intervention should embrace qualities that can enter into meaningful dialogue with the existing situation. "Since our feelings and understanding are rooted in the past, our sensuous connections with a building must respect the process of remembering" (Zumthor 1998, p. 18).



Fig. 1.5.3. Transvaal Provincial Administration building.

1.6 Objective_

This dissertation aims to create a multi-sensory architectural space within the TPA building. This approach will move away from a singularly visual design approach to one that experientially accommodates all the senses within architecture.

1.7 Outline of the Study_

The design proposal is limited to the two southern wings of the TPA building, referred to as the study area illustrated in Fig. 1.7.1.

The primary focus of the design is the provision of additional vertical circulation within the study area to better accommodate the main two proposed programs; a conference facility and a facility for Pretoria's Art Association.(Fig. 1.7.2) Both of these programs require architectural spaces with strong civic character.

In addition, the eastern section of the study area is further limited to the ground and first floor, which form part of the design proposal as shown in Fig. 1.7.3.



Fig. 1.7.1 Proposed study area.

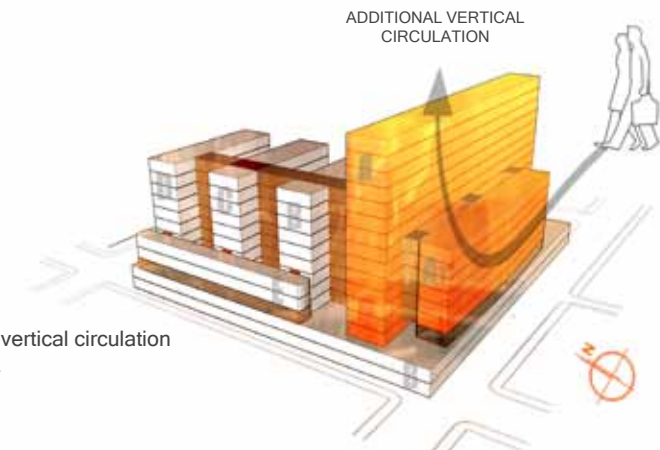


Fig. 1.7.2 Additional vertical circulation within the study area.

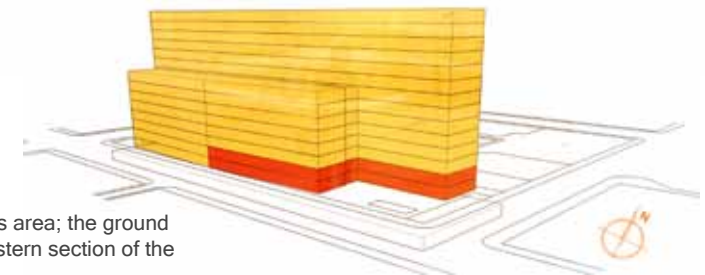


Fig. 1.7.3 Design focus area; the ground and first floor of the eastern section of the study area.

1.8 The client body and user group_

Client _ Pretoria Association of Arts.

The Pretoria Arts Association, established in 1947, currently resides in Mackie Street, Nieuw Muckleneuk (Fig. 1.8.1) and is in need of larger facility.



Fig. 1.8.1 Pretoria Arts Association current facility.

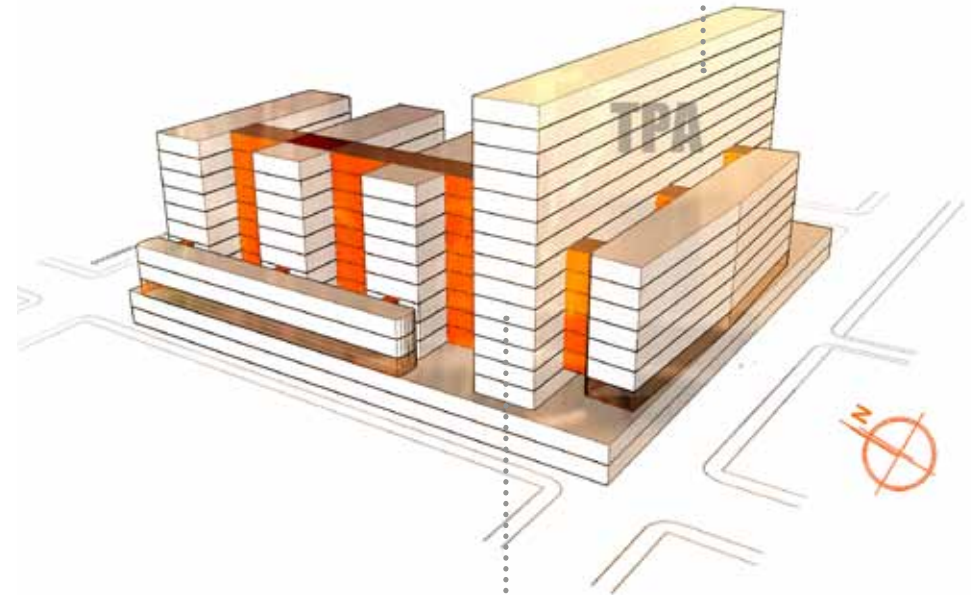
The association hosts:

- Thirty exhibitions a year
- Lectures
- Art classes
- Workshops

[With a public attendance of 500 to 1000 people per month.]

The association additionally hosts three major competitions

- PPC Cement's Young Concrete Sculptor Awards Competition.
- Sasol New Signatures Art Competition.
- Absa L' Atelier Competition



Client_ Conference facility

Providing the city with an additional conference venue with meeting facilities equipped with the latest technology.

1.9 Delimitations_

The design proposal is made on the assumption that the government completely evacuate the TPA building and hand it over to the municipality to be reinterpreted as a civic building.

The design proposal is limited to the two southern wings of the TPA building with the assumption that the remainder of the building will be developed in relation to the proposed design program.

1.10 Methodology_

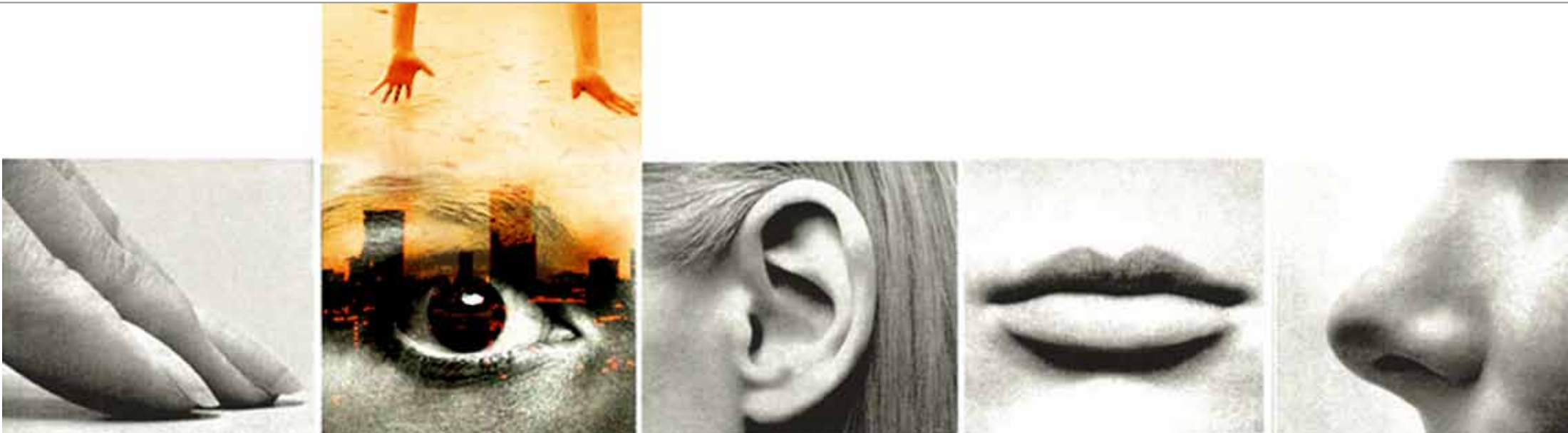
The document is written in the first person due to the personal nature of the dissertation's theme: sensory experiences in architecture based on an individual's own perceptions, memories and feelings.



CHAPTER 2

Design Intention_ Theoretical Framework

This chapter investigates the theoretical influences that informed and directed the design process.







[2] Design Intention_ Theoretical Framework

City Love, my Lady Love
Carien Theart

With her mighty breath she breaths you in,
into her daily rhythms and rituals.
Step out,
step in, into her domain.

Look, look beyond the surface, the multiple facades of her skin.
Stretch out your hand; caress her hidden sensuous curves.
Let your eyes touch her tactile surface,
stroke the patina of wear,
blink at her bright new layers and rest on the familiarity of her frame.
Let your foot soul travel on her black warm tar arteries, onto
cool shaded concrete pavements and circle through her stone arcaded belly.
Her brick- glass- concrete- stone whisper SPEAK volumes, amidst those of
numerous traders,
shopkeeper, residents, work force and school children.
Her body odour is the familiar amalgamation of cooked corn cob, meat
markets, baked goods,
mass clothing and petrol fumes.
Lift her veil; discover the refuge of her peaceful alcoves.
Admire her shop front face, bask in the brilliance of her multi-coloured
jewellery
displayed for all to see.

With her silent breath she inhales you,
into her deep breathing, of shadows and lights.
She is a mighty pulsating living organism.

Can you hear her beckoning you?

“Step out,
step in, into my domain.
Look beyond.”

[View Addendum A for further visual exploration of the poem.]



2.1 Sensuous city.

2.1. Introduction_

"I confront the city with my body, my legs measure the length of the arcade and the width of the square, my gaze unconsciously projects my body onto the façade of the cathedral, where it roams over the mouldings and contours, sensing the size of recesses and projections; my body weight meets the mass of cathedral door, and my hand grasps the door pull as I enter the dark void behind. I experience myself in the city and the city exists through my embodied experience. The city and my body supplement and define each other. I dwell in the city and the city dwells in me." (Pallasmaa 2005, p.40)

Our bodies are the centre of our experiential world. The senses are biologically grounded in the physical structure of the body and operating through the body provide us with information about the world around us. The constant gathering of immediate sense data forms our subjective realities and is vital to our perception and memory of place. It is truly through our senses that we perceive the world, form, space and architecture. Pallasmaa (2005, p. 41) believes that architecture strengthens our experience of self.



Fig. 2.1.1 Pretoria CBD, a sensory experience.

2.2 Phenomenological approach_

One of the fundamental human questions is the search for existential meaning. When God told Cain in Genesis 4.12; you shall be a restless wanderer on this earth, he put man in front of a basic problem; Norberg-Schultz (1996, p. 426) offers the following challenge "to cross the threshold and regain the lost place."

Phenomenology has endeavoured to address this question. According to Heidegger (1889-1976), phenomenology focuses on the human subject, seeking to understand the nature of "being in this world" (1983). Norberg-Schultz's (1996, p. 414) possible answer to the human desire to *make sense* of the environment, is a "return to things". He declares that architecture provides us with this essential "existential foothold" on earth which will provide us with "orientation" in space and "identification" with the specific character of a place.

In accordance to phenomenological theoretical positions I am of the opinion that human experiences grounded in a multi-sensual dimension, guides an understanding of being situated in space in relation to places. This study seeks to offer the senses a more integrated role in architecture; where these elements not only guide our human relationship to the world, but also structure our space and define the place we find ourselves in.

2.3 Visual hegemony_

Vision is an important aspect of understanding and experiencing the world. However, through this thesis I attempt to prove that the neglect of the non-visual dimension, caused by Western culture's ocular centric bias, has impoverished our spatial understanding.

Descartes' declaration; "I think: therefore I am" can boldly be replaced with the statement; "I see, therefore I am." From as early as the Classical Civilizations (800-337 BC) it becomes evident that sight is seen as the jewel in the sensory crown. This visual sense preference is visible in Plato's (427-

347 BC) views regarding vision as humanity's greatest gift (1994, p.27). Aristotle (384-322 BC) stated that sight is the noblest of all the senses and that it "approximates the intellect most closely by virtue of the relative immateriality of its knowing" (Flynn 1993, p. 274). Heraclites (534-475 BC) wrote in one of his fragments, "The eyes are more exact witnesses than the ears." (1993, p.1).

In the Middle Ages (373-1453 AD) the Roman Catholic priest Thomas of Aquinas applied the notion of sight to other realms of the senses as well as to intellectual cognition. (Adler 1968)

In the Renaissance period (1400-1800) the five senses were understood to form a hierarchical system from the highest, the sense of sight, down to the lowest, the sense of touch. The invention of perspective representation placed the eye in the centre of the perceptual world. In the Baroque period (1600-1700 BC) the visual experience is known to have had a strong tactile or haptic quality that flows into the Pre-Modern years (1800-1880 AD) where vision came to be characterised by uncertainty and unreliability. Clark (2007) affirms it with a pun when stating: "It is as though European intellectuals lost their optical nerve."

The Modernists' (1890-1940) reintroduction of the hegemonic sense of vision is illustrated by statements of Le Corbusier (1887-1965) "I exist in life only if I can see" and "one needs to see clearly in order to understand." (1991, p. 7 & p. 231). This is supported in the declaration by Gropius (1959, pp.15-25); "He [the designer] has to adapt knowledge of the scientific facts of optics and thus obtain a theoretical ground that will guide the hand giving shape, and create an objective basis."

Bloomer and Moore (1977, p.29) state that by the end of the nineteenth century nearly all aesthetic problems dealing with three-dimensional forms were automatically treated as visual problems.

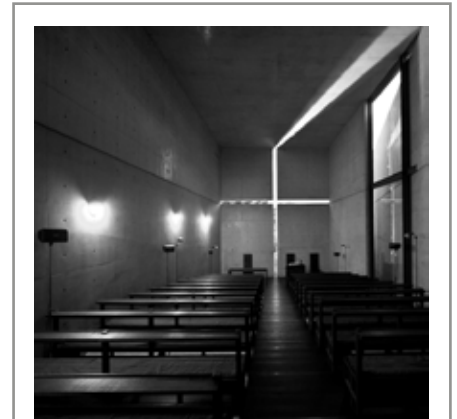
The dominating role of the eye that runs parallel with the development of the western world view, is gradually separating us from a sense of our self

and the world. We have become spectators on a meaningless visual journey devoid of emotional involvement, identification and participation. The modern city viewed from our car windows emphasizes this detached state of the eye from the body.

'Instead of experiencing our being in the world, we behold it from outside as spectators of images projected on the surface of the retina.' (Pallasmaa 2005, p.30)

This separating ability of vision is starkly contrasted to the other senses ability to unite us with our surroundings. Sullivan and Gill (1975, p.181) have observed that: 'sight paints a picture of life, but sound, touch, taste and smell are actually life itself' According to Pallasmaa (2005, p.10), the eye can be liberated from its historical patriarchal domination through the loss of focus. Peripheral and unfocused vision is the very essence of our lived experience. Focused vision confronts us with the reality of the world whereas peripheral vision envelops us in the flesh of the world.

Lynch (1992, p.2) substantiates Pallasmaa's theory by stating that our perception of the city is not sustained, but rather partial, fragmentary and mixed with other



CHURCH OF LIGHT

Architect: Tadao Ando
Place: Ibaraki, Osaka, Japan
Date: 1989

The Church of Light combines the basic architectural elements of wall, floor and ceiling with only a few openings, into a sacred and powerful space embedded with the power of light. Ando created an abstract geometrical form of cold concrete that contrasts the warm, soft feeling of light and wooden furniture, to allow the architecture to appeal to the senses.

Fig. 2.3.1 Cruciform opening of light .
Reference: McLuhan, M. 1995.
Experience. London : Perkins.



concerns. “Nearly every sense is in operation, and the image is the composite of them all.”

An architectural approach conscious of all the senses goes beyond the visual appearances of a building. This idea is observable in Tadao Ando’s philosophy to architecture; “I wish to build an architecture which would appeal not only to the eyes of viewers but to all the five senses of men.” (Ando 1990, cited in McLuhan 1995, p.34). Illustrated in Fig. 2.3.1.

Architecture leads the encountering body into its hidden form where the inherent ability to arouse mental images charged with emotional connotations is found. These images are rooted in the individual’s own perceptions and sensory memories.

2.4 Memory rooted in sensory experience_

Memory is the present’s mode of access to the past. The past is preserved in time, while the memory image, one of the past’s image or elements, can be selected according to present interests.– Elizabeth Grosz (Porter 2004, p.116)

There is no doubt that the senses are a powerful vehicle for memories to penetrate into our deepest recollections, evoking the emotions that a given stimuli had originally stimulated, and bringing to the surface pleasures or pains that invariably stir our feelings anew. Memory, perception and imagination are in constant interaction. Pallasmaa (2005, p. 68) states that cinema and literature would be devoid of their power of enchantment without our ability to enter a remembered or imagined place. Through memorial trace and recollection, we construct places, precincts and even whole cities in the metropolis of our mind.

In the architectural, domain memory inserts an important dimension. It is in the remembrance of past experience that our reality is coloured into perspective. When encountering built form, our own emotions and perceptions are projected on to the space and add to the dimensions of the experience of that place. Zumthor (1998, p.8) says when he concentrates

on the specific site on which he is to design, involuntary images of other places invade the process of observation. These could be images of places he knew and that had once impressed him or images of ordinary or special places that he had carried with him as inner visions of specific moods and qualities.

Tapping into the inherent potential of associative memories, an architecture guided by sensory experiences can be enhanced and begin to articulate our experience of being in this world.

2.5 Body and memory_

Our bodies thus contribute to our spatial and temporal perceptions. Paul Rodaway uses the metaphor of the body being a ship and the senses its anchor in our life-long geographical experience in his book: *Sensuous Geographies; body, sense and place*. Thus, senses are the mediator between us and the environment, giving us access to a world beyond ourselves. He goes so far as to state that without our bodies we would have no geography, implying orientation, measure, locomotion and coherence. (1994, p. 31)

Our bodies are the centre of our world; we experience the environment from within this 'circumambient space' or immediate geography. But this immediate geography is extended by our body's senses, the intimate senses of smell and touch and the distant senses of hearing and sight. According to Rodaway (1994, p. 32), with the aid of memory and expectation, the locomotion of the body allows the development of a wider 'map' of the environment through which it travels. Furthermore technology extends the reach of the body and gives us a sense of experiencing a world apart from the body.

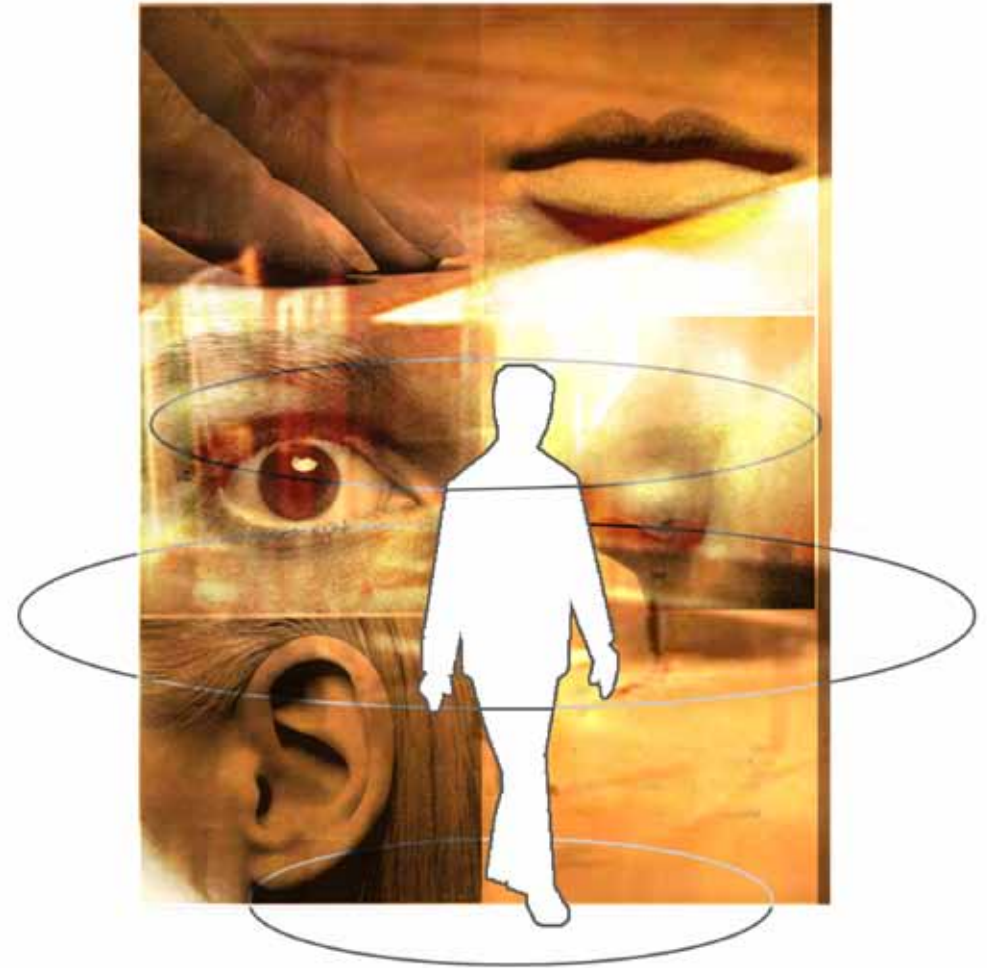


Fig. 2.5.1 The bodies as centre of our experiential world.

2. 6 Emergence of a design genesis_

An objective begins to emerge of how architectural spaces can distort vision in such a way that peripheral images are consciously formed that triggers subconscious sensory perceptions rooted in memories.

By questioning this visual hegemony, existential understanding is gained through incorporating neglected sensory awareness. A new agenda to re-sensualize architecture will bring out the phenomenological potential that exists between hard spaces, such as floors, walls, ceilings and soft spaces, emanating from the non-tangible, sensuous elements present, such as heat, smell, sound, electromagnetic waves and colours. This will articulate our experience in the world we live in. Zumthor (1998) says that in order for us, as designers, to design buildings with a sensuous connection to life, we must think in a way that transcends form and construction.



Fig. 2.6.1 The fusion of the visual and haptic in city experience.

2.7 Senses in an architectural dimension_

The formulation of a new architectural approach, conscious of the senses, will function as a signpost to guide the direction of the design process.

2.7.1 Smell

Smells do not present us with scenes or views, or the arrangements of objects at certain distances. However, only eight molecules of substance potentially trigger an impulse of smell in a nerve ending which, unknowingly, directs us to re-enter a space completely forgotten by our retinal memory. The nostrils awaken forgotten images as it encourages the eyes to remember.

Olfaction is one of the ingredients of an invisible architectural structure, where places are experienced through the sense of smell. It is not inclusive of a physical chemical sensation or a mental memory activity but becomes a directing agent through life. Olfactory experiences provide us with subliminal geographical understanding of the world around us. In the organisation of space and spatial relationships, our orientation and locatedness in space, characterises our relationship to places (Rondaway 1994, p. 62). Pallasmaa (2005; p 55) says that every city has its spectrum of tastes and odours. Steel (2008, p.116) emphasises this by writing that London once was a city of smells and she could map her life there through them. But smell has become our most underrated faculty, one we have learnt to disdain. Rodaway (2008, p. 116) explains that the adaptive sensitivity of olfaction is excited by novelty but dulled by the familiarity or habituation. The familiarity of particular odours dull our sensitivity to the present encounter with it, but can be renewed afresh at another time and place.

Perliss (2006, p. 14) states that the implementation of the evocative potential of the sense of smell can penetrate our deepest recollections and evoke the original emotions that a given scent had stimulated. The odour memory not only brings back the pleasures or pains associated with

it, it also stirs our feelings anew. Investigating this intimate relationship between smell and emotion the designer begins to enter a perceptive sphere where primal ungovernable emotions are stirred that can add special experience.

It is clear that different cultures and periods define the olfactory experience and its geographical role differently (Hall 1969). Compared to the emotional and associative olfactory imagery the poet paints, contemporary architecture appears sterile, even lifeless, in its deprivation of scents. Just as the poet has mastered the skill to release the scent and taste concealed in words, the architect's objective must become the uncovering of the invisible olfactory dimension. A design conscious of this dimension will result in significant works of architecture which will encompass the full spectrum of life experienced in space.

Derived design guideline:

- Consider the olfactory dimension by investigating the air circulation and flow in the building.
- Incorporate the associate potential of scents.



Fig. 2.7.1.1 The potential of the sense of smell in architecture to evoke memories.

2.7.2 Taste

The sense of taste in architecture is an abstract concept and is usually experienced in conjunction with the other senses. We do not literally taste stone or marble, but a distinct scent in a room, the texture of a material or a colour projected onto the skin can intensify the experience to such a extent that it is as if the taste bud of the tongue has been penetrated.

The fusion of sensory experiences is illustrated in the writings of David; “taste and see that the Lord is good.” (Psalm 34.8) This is reiterated in Adrian Stroke’s (1978, p. 243) words when connecting the oral sensation to the tactile dimension: “In employing smooth and rough as generic terms of architectural dichotomy I am better able to preserve both the oral and the tactile notions that underlie the visual. There is a hunger for the eye, and doubtless there has been some permeation of the visual sense, as of touch, by the once all-embracing oral impulse.”

Gibson referred to a smell-taste perceptual system (1968) and suggested that the simultaneous experience of these two senses can be attributed to the fact that they both appear to be chemical in essence. The sense of taste is primarily associated with taste buds on the tongue and the sense of smell through the hairs in the nose.

Pallasmaa (2005, p. 59) states that the most ancient origin of architectural space is found in the mouth cavity. The exploration of the many facets and multi-sensory fusions of the sense of taste can enhance the architectural experience. He believes that the sense of taste can lead the body into intimate contact with the world through architectural emphasis on the experience of taste.

Derived design guideline:

- Consider the taste associations when selecting materials and introducing colours in the design.



Fig. 2.7.2.1 The fusion of sensory experiences in architecture to stimulate tastes.

2.7.3 Touch

Touch is intimate and direct and possibly the most truthful sense. "Touch is the sense least susceptible to deception and hence the one in which we tend to put the most trust." (Tuan 1993, p. 45) Jesus had to be touched by doubting Thomas before he believed in the resurrection. (Fig. 2.7.3.1)



Fig. 2.7.3.1 The Incredulity of Saint Thomas by Caravaggio, 1601-1602

Touch, or the haptic system, provides us with information about our environment and the object contained within it. The skin reads the density, weight, texture and temperature of matter and becomes a mediator between the body and the surrounding environment. The haptic system is an important reference point which permits us to explore the tactile world and touch the intricate details of this world.

Rodaway (1994, p. 43) explains that the human skin is the first means by which we acquire a geography, a sense of this world, when moving from the aquatic womb to the relatively dry air environment. Right from the start, the skin is a highly adaptable perceptual system which orients us with respect to features in the immediate part of our world.

Good architecture conscious of the haptic dimension, renders the experience of the skin. Through the observation of a building's shape and surface one's eyes begin to touch. Pallasmaa (2005, p. 5) says the tactile sense unites us with time and tradition: through the impression of touch we shake the hands of countless generations. But beyond the traces of the surfaces and shapes in architecture the skin measures, with precision, the temperature in spaces whether it is the cool, revitalising shadow or the warm caress of a spot of.

The significance of the haptic experience in architecture lies within the wider context of multi-sensual experiences in the environment.

Derived design guideline:

- Investigate the haptic quality of materials for specific applications.

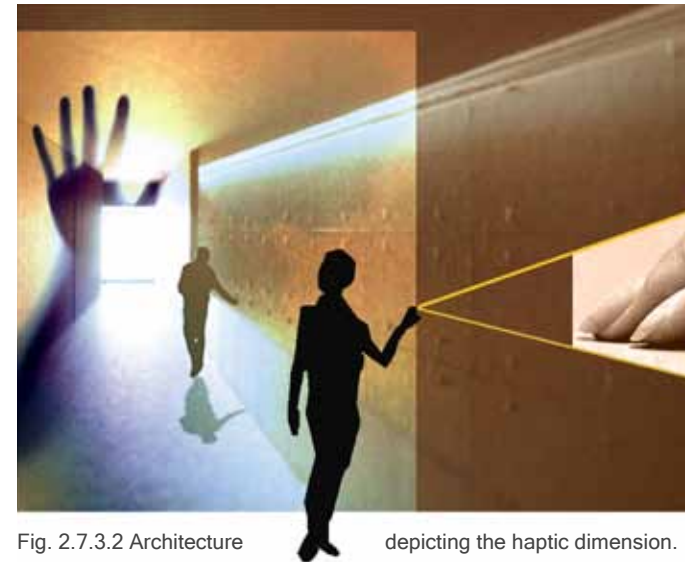


Fig. 2.7.3.2 Architecture depicting the haptic dimension.

2.7.4 Hearing

The term ‘auditory’ can encompass both hearing and listening to “describe the sensuous experience of sound in the environment and the acoustic properties of that environment and the employment of the auditory perceptual system.” (Rodaway 1994, p. 84)

The ear is the focus of our auditory perceptions. It is a complex organ devoted to collecting vibrations from the air and converting them into nerve impulses which are interpreted by the brain. Auditory perception, like all the other forms of sensuous experience, involves the whole body. Rodaway explains that this auditory presence of the body can occur both explicitly, through the vocal cords, and implicitly, through the friction of movement against the external environment. But most importantly, the body has its own biorhythms which allow us to measure the pattern of sounds through rhythm, pace and duration. (1994: p 91) Under such an interpretation, a deaf person would be able to *hear* with his skin when passing through a space.

Ihde (1976) has stated that we not only perceive of the world, but have a presence in it. This statement is enforced by Rodaway (1994, p. 91) saying that in sensuous experience, the auditory world not only surrounds us but we seem to be participants within it.

Within architecture, the physical form of the environment adds to the auditory experience. In open spaces or enclosed volumes the presence of wind, the moisture of the air and even the background sounds we are mostly unaware of, fill the space and modify the impact and intensity of the character of that place as a soundscape. Consequently, the structure of the architectural environment, its enclosed- or openness the properties of the materials and whether it is absorbing or resonating, play an important role. Zumthor (1998) says that interior spaces are like large instruments, collecting sound, amplifying it and transmitting it. This quality is linked to the particular shape of each room and the surface of the materials and the way they have been applied.

“Therefore the wonder of the auditory system, as with all perceptual systems, is the way it manages to decipher an order, a sense of the world, and of people, places and spatial relationships from this complex mass of sensuous information.” (Rodaway 1994, p. 92)

Derived design guideline:

- Design with the acoustic potential of volumes in mind.
- Select materials in relation to their auditory character.



Fig. 2.7.4.1 The Auditory dimension of a body waking through space, hearing with the ear and the skin.

2.8 Theoretical precedent

Theoretical precedents looks at the potential of materialising phenomenological theories grounded, in a multi-sensual dimension, into built form.



Fig. 2.8.1

THERMAL BATHS AT VALS

Objective: The exploration of the essence of architecture that celebrates place and engages all the human senses.

Description: Thermal baths.

Place: Vals; Switzerland

Designer: Peter Zumthor

Date: 1996

The thermal baths at Vals is a product of Peter Zumthor's sensitivity concerning place, space, light, materiality and the human response to these elements of architecture.

The thermal baths is a big rectangular block building which projects out of the hillside and is made of local Valsler quartzite and concrete. Although the building seems static at first glance, the spatial concept is dynamic. It is this duality of impression between the kinetic and the still which makes the building a place of relaxation through action. (Davey 1998, p. 69)

'The great monolith is carved into with simple square openings, some of which are glazed. A concrete roof beam serves as a cornice. From above, the grassy roof is dissected into a Mondrian-like pattern by smooth pale green strips of what, on closer inspection, turns out to be glass' (Davey 1998, p. 69). Streaks of daylight are filtered to the inside which enhance the sense of fluidity of the space. The qualities of water stand in stark contrast to the solid, silent nature of the stone, illustrated in Fig. 2.8.1 (Davey 1998, p. 69).

Zumthor believes: "to experience architecture in a concrete way means to touch, see, hear and smell it" (1998, p.66).

This design objective of Zumthor becomes evident in the promenade round the inner pool. It offers a range of sensory stimulating experiences as swimmers visit the smaller spaces carved into the perimeter walls. "Each of these small sanctuaries are treated in a different way: smooth concrete, gray or coloured, rough or polished stone; reverberant or still; light or sometimes frighteningly dark, light up, sideways, down, or not at all. You feel the place through your feet and limbs as well as your eyes, ears and nose." (Davey 1998, p.70)

Design influence:

What becomes evident in the Thermal Baths at Vals is Zumthor's phenomenological approach to gaining insight into the experiential dimension of architecture. The 'everyday' and its associated rituals, emotions and memories are captured in a dramatic way. Through the Baths, Zumthor has created a world of tranquillity and slowness where visitors can catch their breath 'outside' of time.

(Kotze 2009, p.69) This approach of Zumthor to capture the sensuous nature of the everyday becomes an important theoretical backdrop to this thesis.



Fig. 2.8.2

Fig. 2.8.1 A streak of light captured between water and stone in the Thermal Baths at Vals.

Fig.2.8.2 Bath chamber filled with sensorial experiences.

Reference: Kotze, P. 2009. Thinking Architecture. Architecture South Africa. March-April 2009. p 68-69.

Davey, P. 1998. Zumthor the Shaman. The Architectural Review. October 1998. Volume 205, p. 68-74.

Fig. 2.8.3 A passage in the labyrinth.



Fig. 2.8.3

SWISS PAVILION

Objective: A pavilion design engaged with all the human senses.

Description: Swiss Pavilion.

Place: Hanover; Germany

Designer: Peter Zumthor

Date: 2000

The Swiss Pavilion designed for the 2000 Exposition held in Hanover, is a labyrinth timber structure encapsulating a unique sensuous experience. It is comprised of a grid of walls made with unseasoned wooden boards, simply overlapped without any mechanical fastenings. (Domus 2000, p. 25)

Light, wind and rain were permitted to penetrate the pavilion: making the material seem to "breathe" with the natural elements, following their altering rhythms. Zumthor captures the inherent acoustic, luminous and aromatic language of the wood with sensitivity.

Reference: Unknown, 2000. Klangkörper Schweiz: the Swiss pavilion at the Hanover Expo 2000. Domus. July-August 2000. Issue 828, P. 24-31

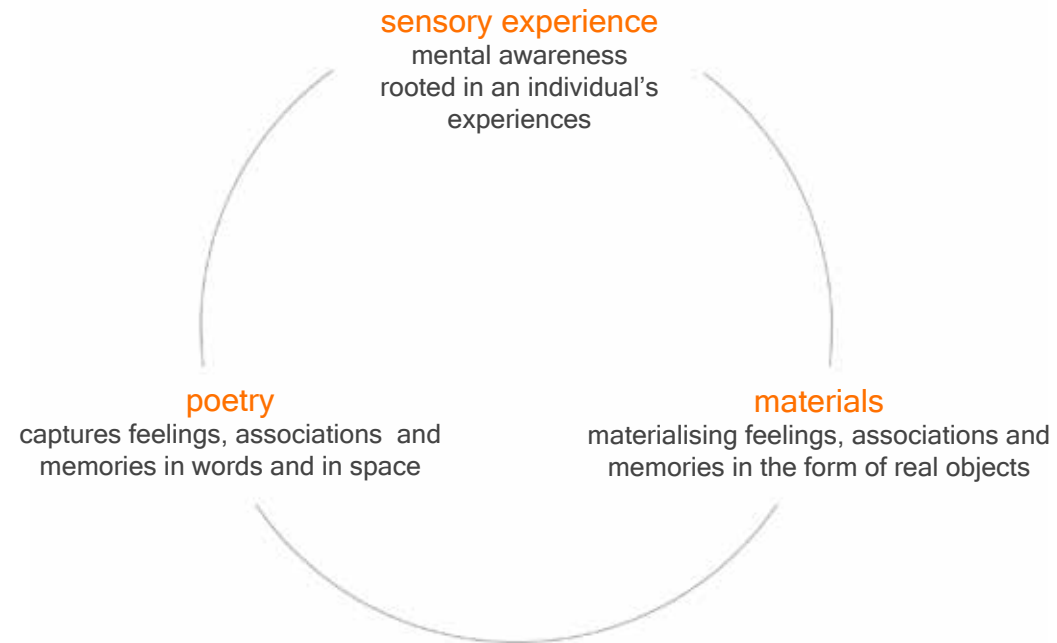


Fig.2.9.1 The three key dissertation themes.



2.9The concept_

Peter Zumthor states (1998, p.21), “the design process is based on a constant interplay of feeling and reason.” In this thesis “feelings” may be interpreted as the theoretical premise of architecture concerned with sensory experiences and “reason” with the actual materialising of these theories into built form and space. Theory cannot be detached from reality, and to truly transcend a purely theoretical approach, sensory experiences in architecture must be captured in the physical.

I am of the opinion that materials and their inherent properties can fulfill this role of guiding individual experiences along a sensory path. There is no desire to stir up emotions with built form, but to take design beyond visual superficiality and arbitrariness, into spaces where emotions emerge through a quiet awareness of the senses.

This thesis ultimately investigates the interplay between three major subjects; sensory experience, poetry and materials (illustrated in Fig. 2.9.1.)

This interplay of transforming real matter into human sensations leads us back to Zumthor’s (1998, p 30) understanding that objects possess the ability to move us. According to him, these objects have a multifaceted character containing numerous layers of meanings that overlap and interweave as the angle of observation changes. Therefore, Zumthor believes that we must be able to “construct a radial system of approach that enables us to see the work of architecture as a focal point from different angles simultaneously: historically, aesthetically, functionally, personally, passionately” (1998, p18).

In accordance with the dissertation title; Sensory Architecture_ Beyond Appearances, the dominant visual sense is not rejected but extended beyond its existing boundaries into a distorted dimension with simultaneous focal points.



CHAPTER 3

Context: Analysis

Chapter three investigates the context surrounding the TPA building on a macro, meso and micro scale.



3.1 Macro scale analysis_

Pretoria's CBD situated in the greater City of Tshwane is defined by the following borders: D.F. Malan Drive to the west, Nelson Mandela Avenue to the east, the Pretoria railway station to the south with Boom Street forming the northern border (indicated by Fig. 7.3). This area indicating the city's inner district has undergone a steady depopulation for the last two decades due to the gradual emmigration of the public and private sectors to the eastern suburbs.



Fig. 3.1.1 Map of Gauteng Province indicating the position of the municipal ward of the City of Tshwane.



Fig. 3.1.2 Map of the City of Tshwane indicating Pretoria's CBD.

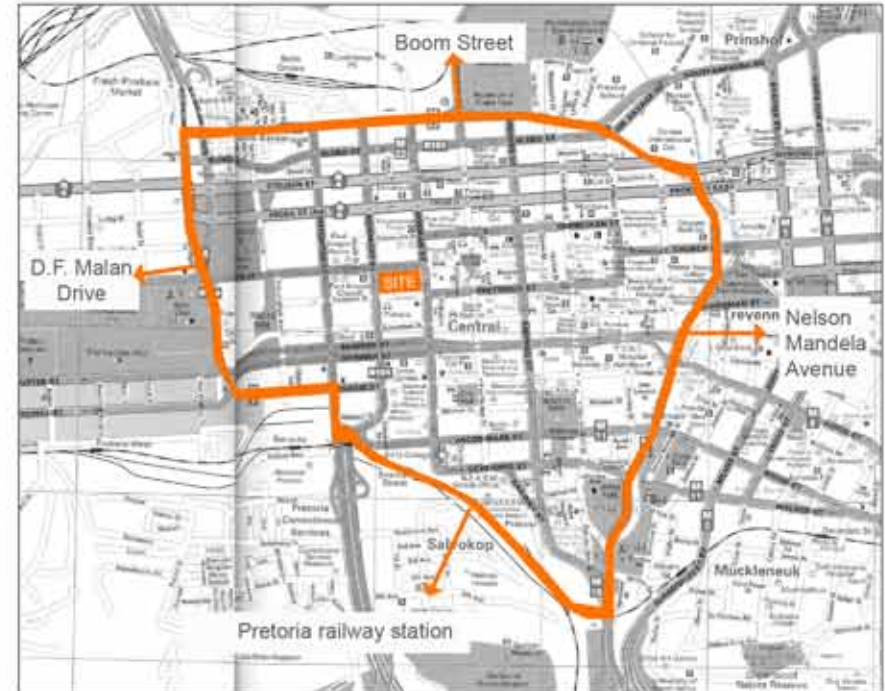


Fig. 3.1.3 The name Pretoria applies to the area bordered by D.F. Malan Drive to the west, Nelson Mandela avenue to the east, the Pretoria railway station to the south and Boom Street to the north.

3.1.1 Urban Regeneration strategies_

Numerous attempts throughout the years have been made to rejuvenate the inner city. In 1968, the former National Party City Council urban renewal plan led to the creation of the pedestrian boulevard between Church Square and Prinsloo Street together with the Sammy Marks Square Development adjacent to Church Street and the State Theater complex. The 1999 Pretoria Inner City Integrated Spatial Development Framework [ISDF], compiled by Capitol Consortium, reflects an urban rejuvenation strategy based on holistic and integration principles which take into account both spatial and non-spatial issues. (1999, pp. 1-77)

Another attempt, made by the Department of Finance in 2004, proclaimed a series of investment friendly zones in Pretoria CBD called Urban Development Zones [UDZ]. These zones offered tax reductions to prospective investors that could be claimed against the cost of improvement to the buildings. According to a guide prepared by the National Treasury: Economic Policy and International Financial Relations Division (2004, p.3), the incentive's aim was to promote refurbishment and new construction within inner city areas decaying rapidly. The 2006 Tshwane Inner City Spatial Development Framework [TICP SDF] was developed to assist with the City's spatial vision. Part of the framework lists a set of key spatial proposals developed to initiate urban renewal within the CBD.

It is questionable if these various strategies have accomplished their goals considering Pretoria's *status quo*. However, the latest program developed by the National Department of Public Works [DPW] in conjunction with the National Department of Public Service and Administration [DPSA] and entitled Re Kgabisa Tshwane, has embarked on surpassing any previous attempts.

What differentiates the Re Kgabisa Tshwane program from its predecessors is its focused vision on the improvement of the public sector. The program endeavours to improve the physical working environments of national government departments and agencies within the city. The provision of long-term accommodation solutions for government departments is

expected to make the inner city more appealing for tenants to remain or return to the inner city. It is believed that continued government investment in the inner city will not only improve the infrastructure and urban management, but also indirectly stimulate the private sector accordingly.

There are 40 departments and agencies currently participating in this project. These government facilities are to be accommodated within seven precincts in Pretoria - the Presidency, Sammy Marks Square, Mandela Corridor, Church Square, Paul Kruger North, Museum Park and Salvokop located on two distinctive, functional corridors. The accommodation solution will utilise all possible existing government owned assets.

[All the above mentioned information was obtained through the Re Kgabisa Tshwane website: <http://www.rekgabisatshwane.gov.za>]

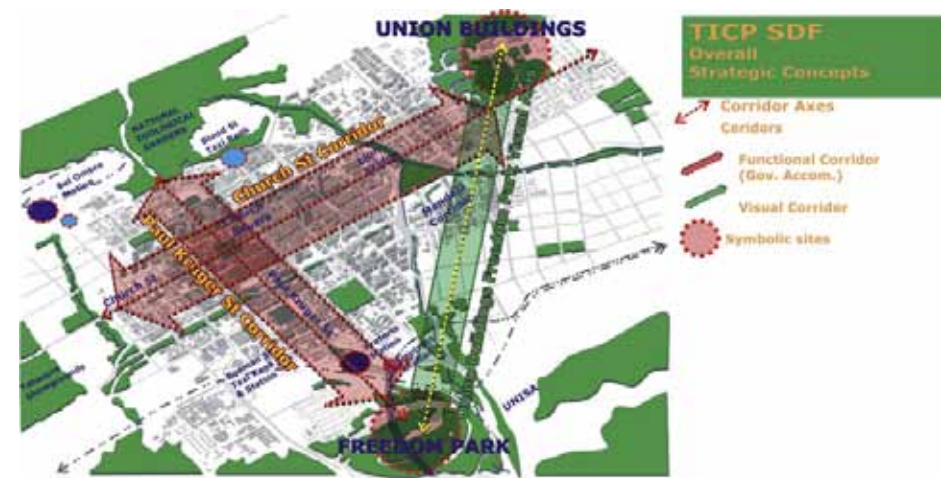


Fig. 5.1.1.1 A diagram depicting the strategic concept of the Re Kgabisa Tshwane program indicating functional corridors allocated to accommodate government facilities.

Derived design influence:

The location of the TPA building, on the corner of Pretorius Street and Bosman Street, is at the centre of the urban rejuvenation strategy. The Re Kgabisa Tshwane program becomes an important role player in the design proposal. Adaptively re-using the government owned TPA building to accommodate a conference facility, will provide the various relocated government departments along Church Street and Paul Kruger Street with essential services.

Exhibition and convention centres can, by their nature, be classified as public buildings which can contribute considerably to the economy of the city and the region in which they are located. Financial investment into these are not only beneficial to the facility, but also to the hotel, tourism and business industry indirectly. This inherent potential of this building type is evident in the effect the Cape Town and Sandton International Convention Centres had on their respective environments as further discussed in the following local typological precedent caption. Introducing a conference facility into the existing fabric of the inner city of Pretoria, which has a dearth of public facilities is ideal.

3.1.2 Local typological precedent

Typological precedents of convention centres are investigated to the inform design proposal.

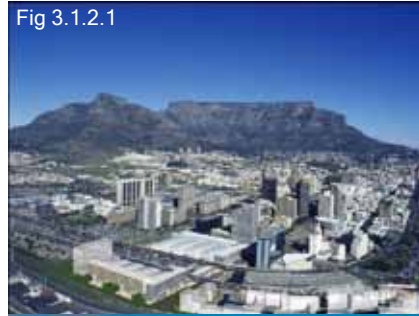


Fig 3.1.2.1



Fig 3.1.2.2

CAPE TOWN INTERNATIONAL CONVENTION CENTRE

Objective: A gateway to the city of Cape Town

Description: International Convention Centre

Place: Cape Town, South Africa

Designer: Foreshore Architects (consortium of seven firms of architects)

Date: 2003

The Cape Town International Convention Centre (CTICC) is a government initiative operated as a commercial venture. It has supplied the Western Cape with much

needed exhibition space and conference facilities.

The allocated old landfill site for the CTICC on the outer edges of the CBD was initially unpromising. The potential of a large building in that area to act as both a catalyst and a link between the city and its surrounding seaside environment outweighed the inhospitableness of the site. (Architect and Builder 2003, p.71)

The design consists of a three level gallery or spine which extends the full length of the site. It links all the elements in a legible and unified movement system. A contrasting element in the design is the windowless state of the exhibition halls in relation to the rest of the accommodation windows that actively invite the public and the city to enter the CTICC. (Architect and Builder 2003, p.73)

The guiding principle for the design of the interiors was that they should be easily cleaned, maintained and durable whilst still remaining attractive. Materials selected are neutral in colour and capable of receiving an extensive variety of different decorations and branding during exhibitions. The neutral shades and textures furthermore act as a backdrop for the variety of artworks on display throughout the centre. (Architect and Builder 2003, p.74)



Fig 3.1.2.3

The facilities housed in the CTICC includes;

- Two raked seating auditoria catering for a minimum of 1,500 and 600 people respectively.
- More than 30 breakaway rooms varying in sizes from 60 to 125 people each.
- Banqueting and function rooms of a wide permutation of sizes ranging from 400-5000m².
- A ballroom of 2000m²
- 10, 000m² exhibition space catering for all exhibition and trade fair organisations.
- A roof terrace room (offering views of Table Mountain) and many foyers, restaurants, VIP and organisers' rooms. (Architect and Builder 2003, p.92)

Design relevance:

The idea that an underutilised site can be transformed into an inviting public facility that acts as a financial catalyst and linkage to the city and its surrounding environment is of relevance to the design investigation.

Furthermore, the notion of exhibition and conference facilities taking on a neutral presence and which act as backdrops to any intervention, responds to the theoretical approach of this thesis. It is compatible with the aim to create sensuous architectural spaces which form the backdrop to conduct individual experiences. This approach can be clarified by Zumthor (1998, p. 13) who states: 'Architecture has its own realm. It has a special physical relationship with life. I do not think of it primarily as either message or a symbol, but as an envelope and background for life which goes on in and around it, a sensitive container for the rhythm of footsteps on the floor, for the concentration of work, for the silence of sleep.'

Fig 3.1.2.1 Aerial view of the Cape Town International Convention Centre.

Fig 3.1.2.2 The 1,500 seater auditorium, situated on the western corner of the site, with the Arabella Sheraton Hotel in the background.

Fig. 3.1.2.3 Interior view of the CTICC.

Reference: Unknown. 2003. Cape Town International Convention Centre. Architect and Builder. July-August 2003. Volume 54. Issue 4, P. 68-93



Fig. 3.1.2.4

SANDTON INTERNATIONAL CONVENTION CENTRE

Objective: A vertical convention centre due to site constraints.

Description: International Convention Centre

Place: Sandton, South Africa

Designer: Louis Karol Architects

Date: 1999

The International Convention Centre is located in Sandton's business district. This area is characterised by introverted commercial developments and office parks. However the design of the Sandton International Convention Centre (SICC) has managed to reverse this trend by forming an interface with the street. This creates an effective mediation between the private function of the building and the public realm of the street. A 90m long by 18m wide and six-story high circulation/foyer space situated in front of Maude Street invites the public to enter the building, illustrated in Fig. 3.1.2.5 (Scholes 2001, p. 22).

According to Micheal Scholes, (2001, p. 22) one of the project architects, the anatomy of exhibition and convention buildings are

usually low-rise and horizontal in form, comprising of the following three major elements:

1. Public circulation and foyer zones, usually linear in nature, are usually directly related to the road with a public drop-off zone.
2. Exhibition/convention halls, which are large, neutral and sub-visible spaces to be dressed and used by others.
3. Back-of-house service zones and trucking areas.

Conceptually, the Sandton Convention Centre follows the general anatomy type. However, the restrictions of the site area have resulted in a multi level facility comprising four double and triple volume spaces stacked on top of each other visible in Fig. 3.1.2.4 (Scholes 2001, p. 22). The artworks, details and textures woven into the interior of the centre provide a humane quality to the spaces and give a sense of scale to the large public facility.

Design relevance:

SICC is an inviting public building due to its interactive nature on street level. A definite contributing factor to this street interface is the welcoming space created by the large volume foyer/circulation space at the entrance. The interactive quality will be applied to the TPA building, in relation to its surrounding street edges. A further design consideration is the centre's vertical shape, where facilities are stacked on top of each other like building blocks. This approach to facility design is suitable to be incorporated into the TPA building.



Fig. 3.1.2.5



Fig. 3.1.2.6

Fig.3.1.2.4 Sandton Convention Centre a multi-level facility.

Fig. 3.1.2.5 The entrance foyer in Maude Street.

Fig. 3.1.2.6 The Bill Gallagher conference room.

Reference: Scholes, M. 2001. Sandton convention centre: Architect's Statement. South African Architect. January-February 2001. p 22-27

3.2 Meso scale analysis_



Fig.3.2.1 Immediate site context.

3.2.1 Site History_

An article published in the Pretoria News (1987) describes the 1930s atmosphere of the Pretorius and Bosman Street intersection as a “quiet street corner with ample parking and wide, tree-lined sidewalks.” This image is far removed from the present, busy intersection carrying heavy amounts of traffic daily.

In the 1880’s this corner was occupied by a wholesale merchant, named Karl F Wolff. Thereafter, by the Pretoria Magistrate’s Court (Fig.3.2.1.1) moved into the building in 1892, after some modifications were made. (The Pretoria News 1987)

Illustrated in Fig. 3.2.1 is the site on which the TPA building is situated. It is comprised of several smaller plots with individual site numbers. From early on, the reigning government had gone to great lengths to obtain these prized plots near Church Square. This area formed the ideal location for the government’s vision to accommodate the headquarters of the administration of the province. After successful negotiations the plots were bought and cleared. The first excavation work for the TPA building commenced on the 14th of June, 1955. Eight years later the completed building was officially inaugurated by the State President, Mr. C. R. Swart (Transvaal Provincial Government 1963, p.5).



Fig.3.2.1.1 Pretorius Street 1893. [Image: Van der Waal Collection]



Fig.3.2.1.2 Transvaal Provincial Administration building 1966. [Image: Van der Waal Collection]



Fig.3.2.1.3 Pretoria Magistrates' Courts 1930. [Image: Van der Waal Collection]

3.2.2 Three dimensional mass analysis_

The PTA building is zoned as a governmental area with a height restriction of 32m, surrounded mostly by businesses indicated by Fig.3.2.2.1.

- 1_ TPA / GPG Block D
- 2_ TPA / GPG Block C
- 3_ TPA / GPG Block B
- 4_ TPA / GPG Block A
- 5_ Time Place (City Property Office)
- 6_ Police Museum
- 7_ Compol Building
- 8_ Department of Home Affairs
- 9_ Department of Arts and Culture
- 10_ Netherlands Bank Building
- 11_ Law Chambers
- 12_ Cafe Rich / Reserve Investment Building
- 13_ Palace of Justice
- 14_ Reserve Bank Building
- 15_ Capital Theatre c. 1938
- 16_ Raadsaal
- 17_ Post Office Building
- 18_ Land Surveyor Building
- 19_ New Poynton's/ Department of Correctional Service
- 20_ HSRC Building
- 21_ Pretoria Central Police Headquarters
- 22_ Information
- 23_ Nedbank
- 24_ Standard bank

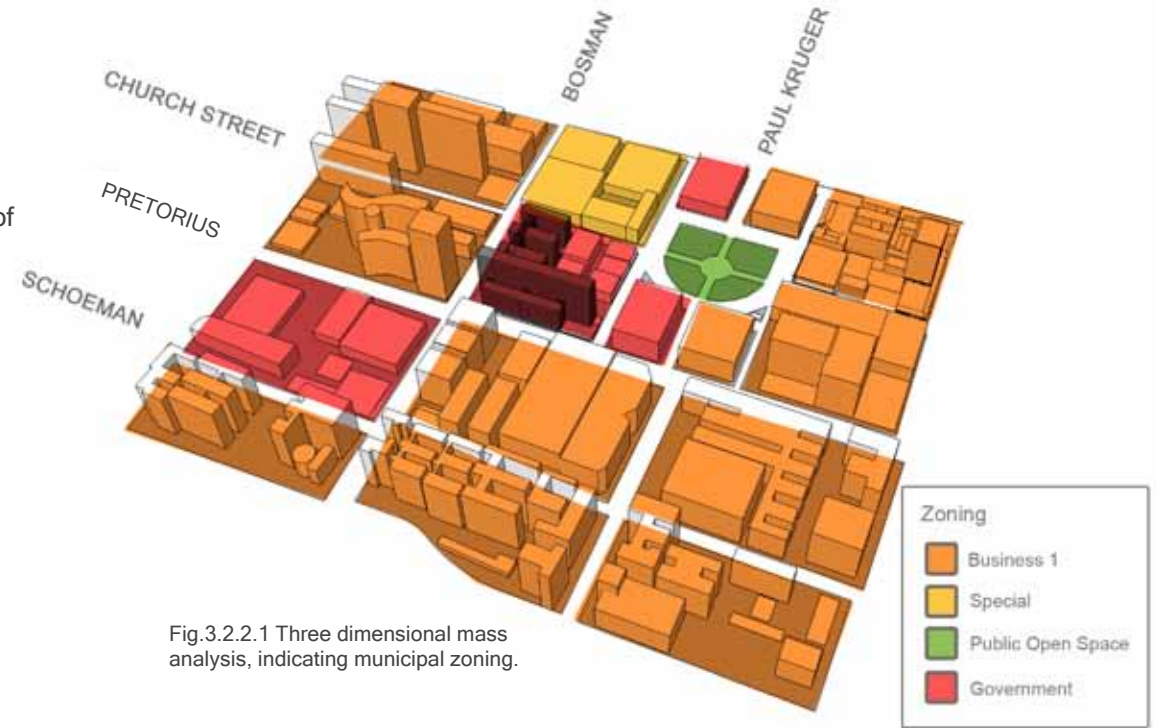


Fig.3.2.2.1 Three dimensional mass analysis, indicating municipal zoning.

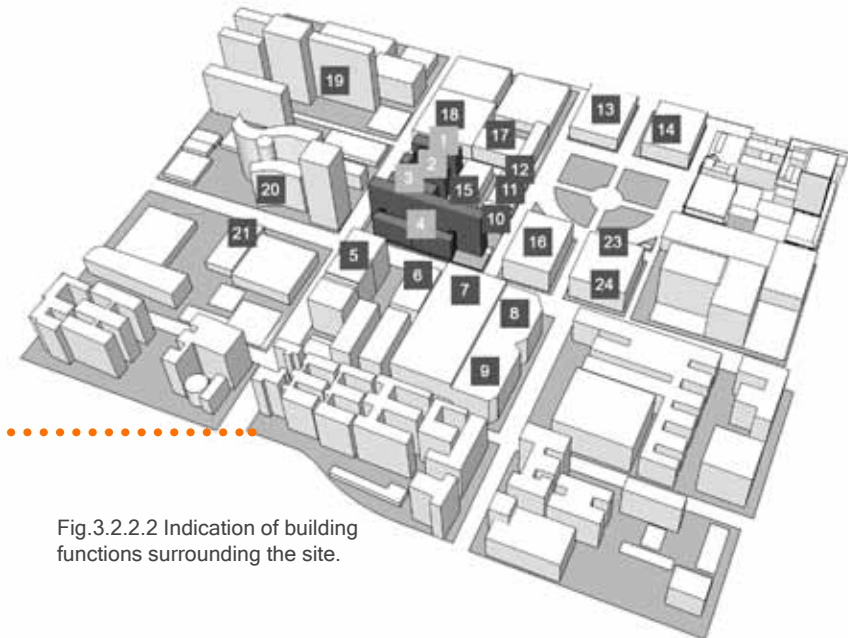


Fig.3.2.2.2 Indication of building functions surrounding the site.



3.3 Micro scale analysis_



3.3.1 Transvaal Provincial Administration building_

3.3.1.1 Background_

The former seat of the TPA is situated on the corner of Pretorius and Bosman Street in the inner city of Tshwane. A commemorative brochure published in 1963, (Transvaal Provincial Government 1963, p.5) listed the following vital statistics of the building:

The TPA building was designed by Meiring & Naudé in association with Moerdyk & Watson and constructed from 1955 to 1963. It accommodated all 2,200 sub-departments of the Provincial Administration and was erected at a cost of approximately thirteen million rand. According to Le Roux (1990, p. 77), the building was the highest office building in Pretoria at the time and led to the 'high rise' typology associated with Pretorius Street today.

3.3.1.2 The composition and form of the building

The TPA building is a composition of six individual block units, designed to adequately comply with all the spatial requirements set by the different TPA subdivisions. These six block units fill the largest part of the south-western street block bounded by Church-, Bosman-, Pretotius- and Parliament Street and frame the south western corner of Church Square.

A double storey basement with storage facilities, archives, boiler rooms, transformer rooms and parking areas for 350 cars, spans the entire area underneath the site. Blocks B, C and D on the northern side of the site nearest to Church Street, each have nine stories. Block E next to Bosman Street, has two stories. The highest block, block A on the southern side has fourteen stories. Coupled to block A is block A1. It has six stories and faces Pretorius Street. All of these free standing buildings are connected by transition corridors.

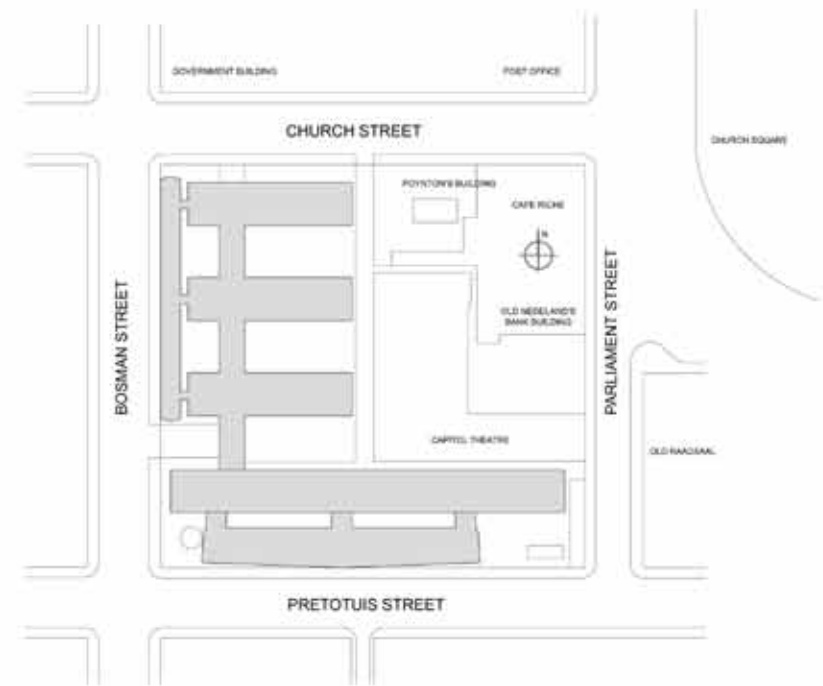


Fig.3.3.2.2.1 TPA building plan.

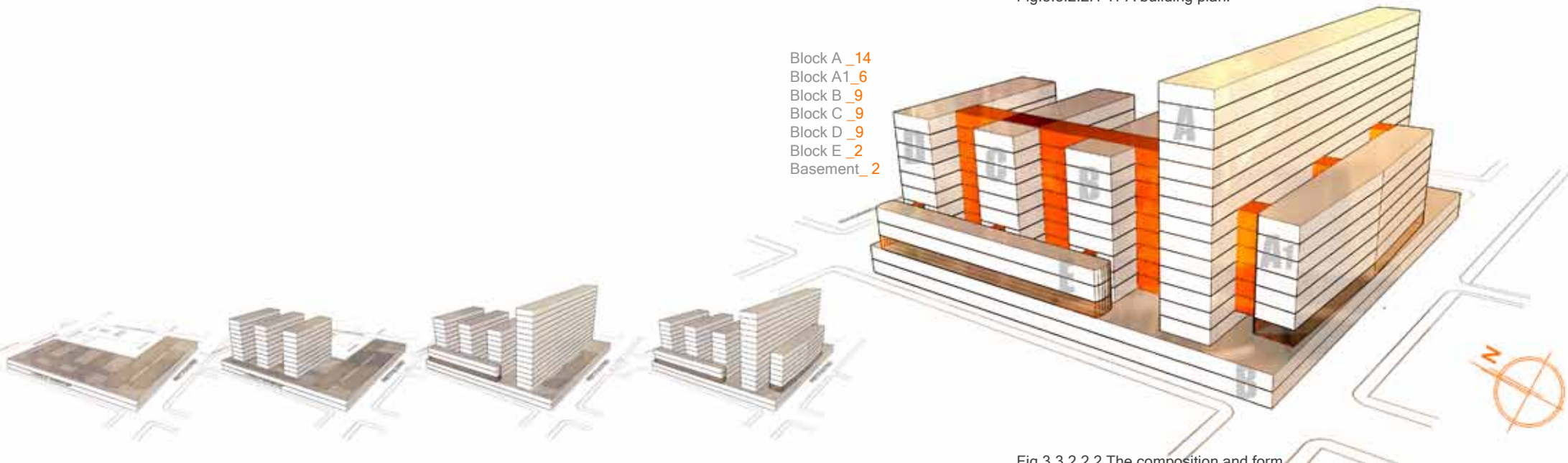


Fig.3.3.2.2.2 The composition and form of the TPA building.



Fig. 3.3.2.2.3 North-western corner of the TPA building on the corner of Church and Bosman Street.

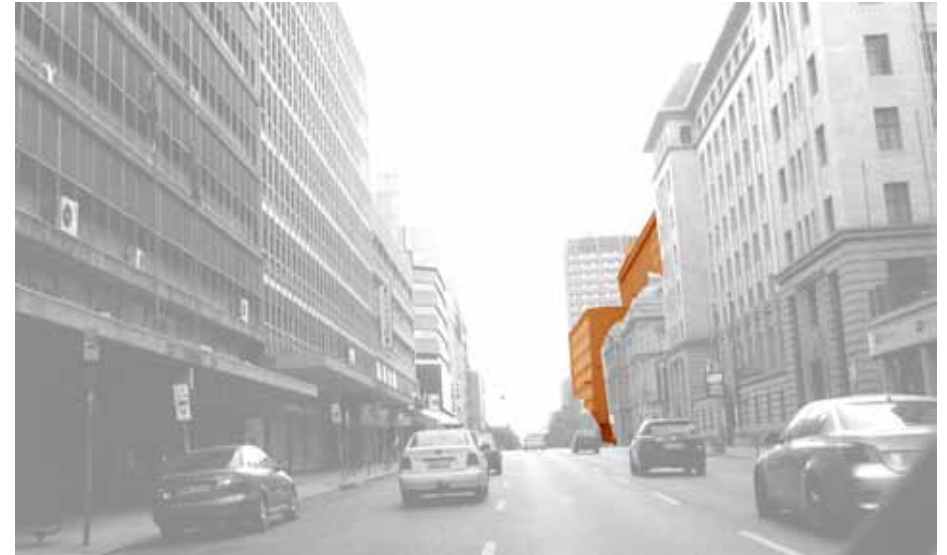


Fig. 3.3.2.2.4 Southern block of the TPA building, facing Pretorius Street.



Fig. 3.3.2.2.5 Corner of Pretorius Street and Parliament Street with palisade, which block off building to the public.

3.3.2.3 Entrances_

The TPA building has six entrances distributed throughout the building, making individual blocks more easily accessible.



Entrance_ Church Street



Entrance_ Church Street



Entrance_ Bosman Street

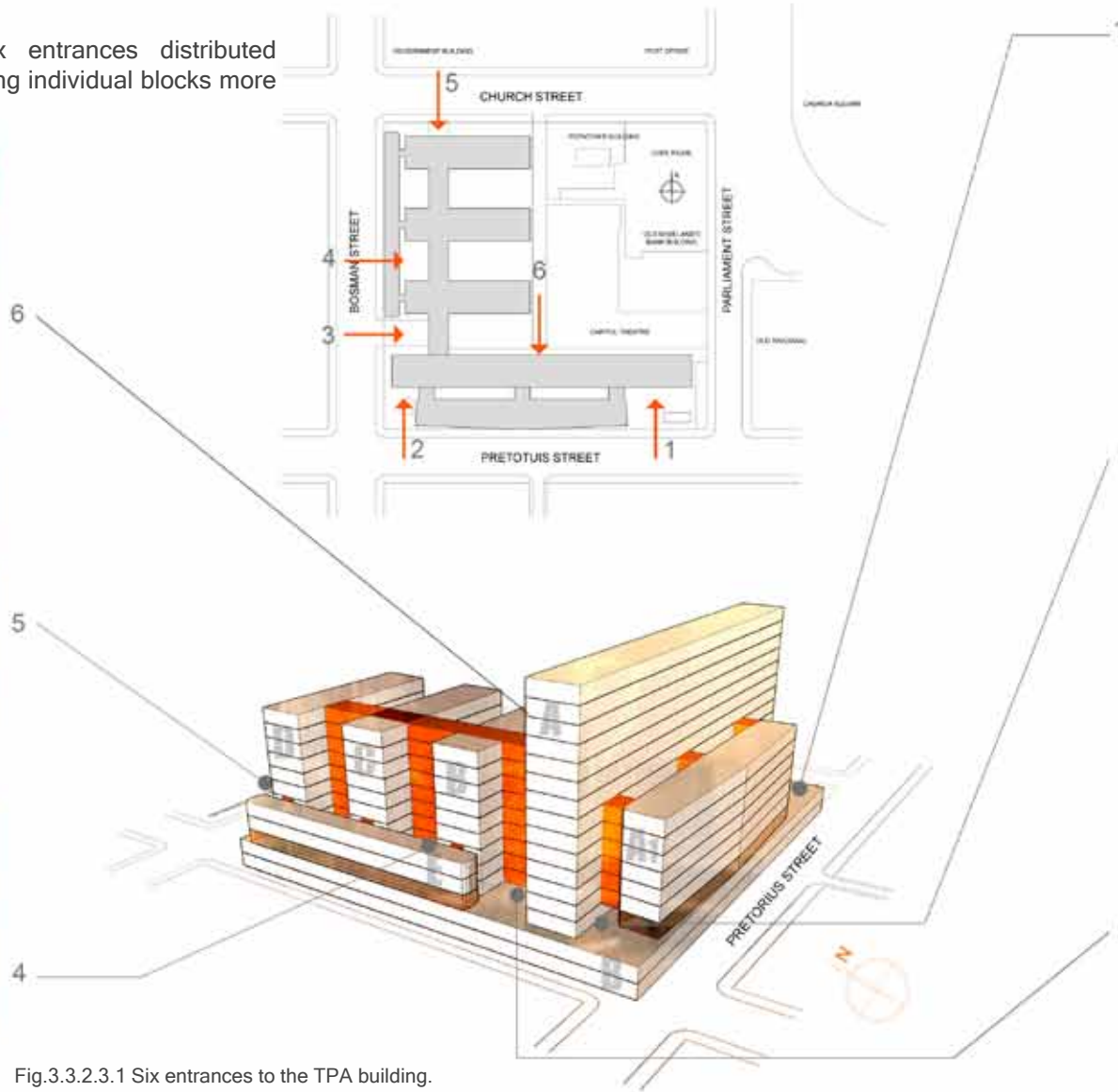


Fig.3.3.2.3.1 Six entrances to the TPA building.



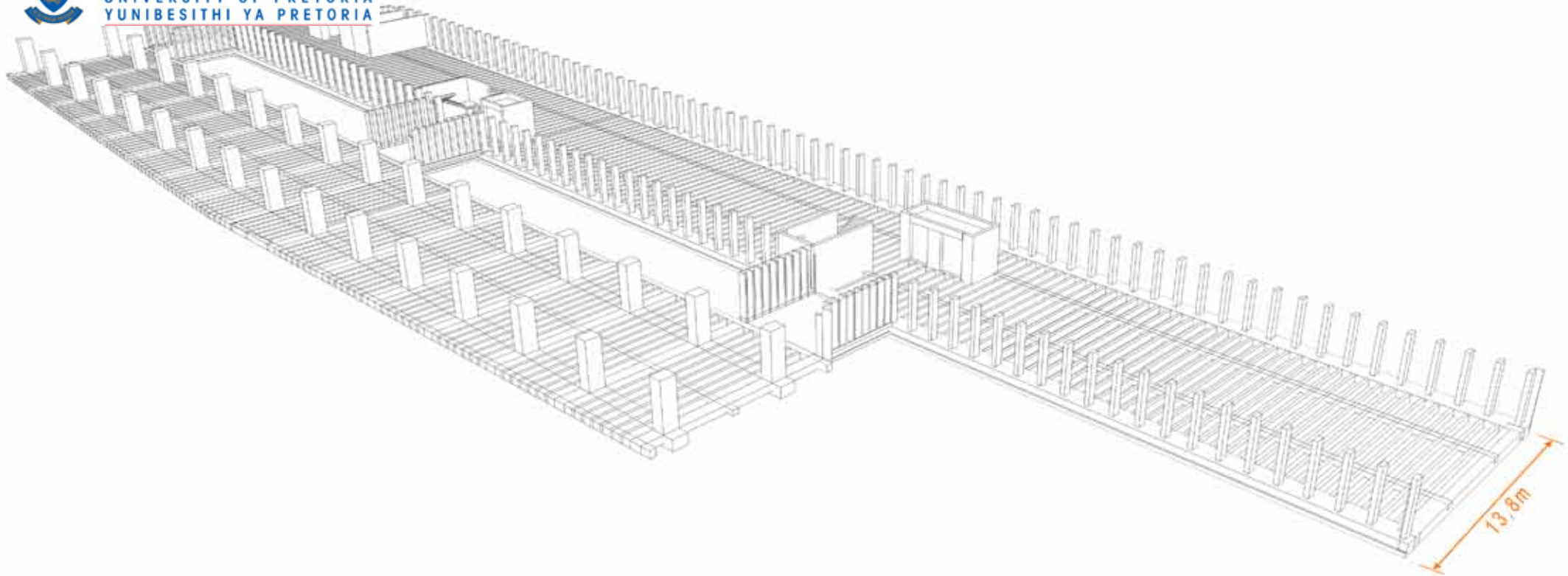
Entrance_ Corner of Pretorius and Parliament Street



Entrance_ Corner of Pretorius and Bosman Street



Entrance_ [Back of house] Bosman Street



3.3.2.4 Structure_

The structure consists of reinforced concrete floor slabs with columns spaced at 1,5m distances. Throughout the entire width of the building the floor slab spans 13,8m and thus excludes the use of internal columns. All window surfaces on the northern and southern sides are made of aluminium curtain walls with 330.2 x 508 mm columns on the inside.

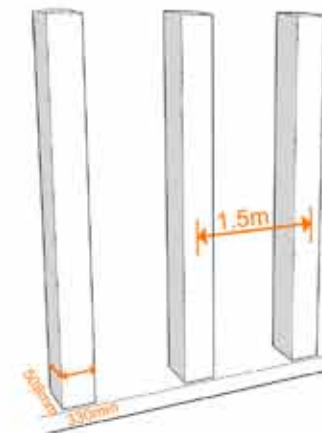
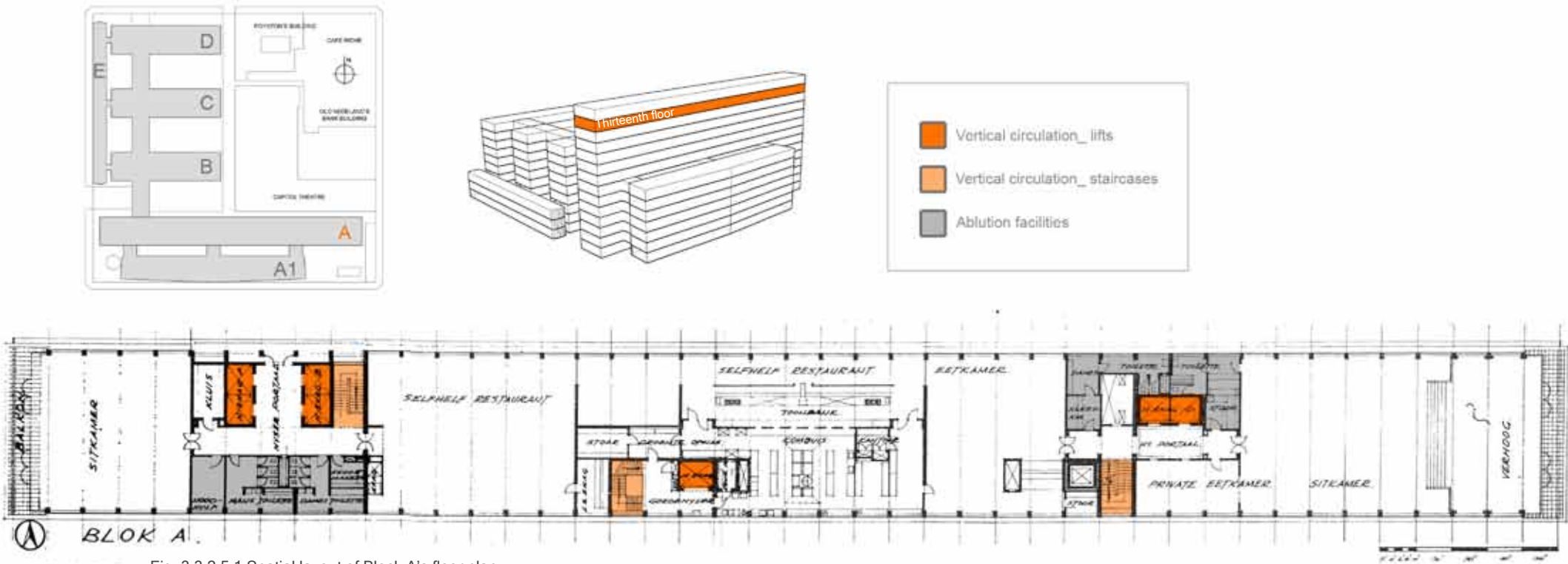


Fig.3.3.2.4.1 Diagrammatic structural illustration of Block A and A1

3.3.2.5 Spatial Layout_

Block A's floor layout is determined by the position of the vertical circulation elements and ablution facilities. These elements divide the space into sections with distinct layouts which meet the functional requirements of the different floors.



Dertiende Vloer Fig. 3.3.2.5.1 Spatial layout of Block A's floor plan.

Block B, C and D have an open plan layout with a system partition wall system forming office space. Vertical circulation and ablution facilities are in the transition corridor that connects the three blocks with each other.

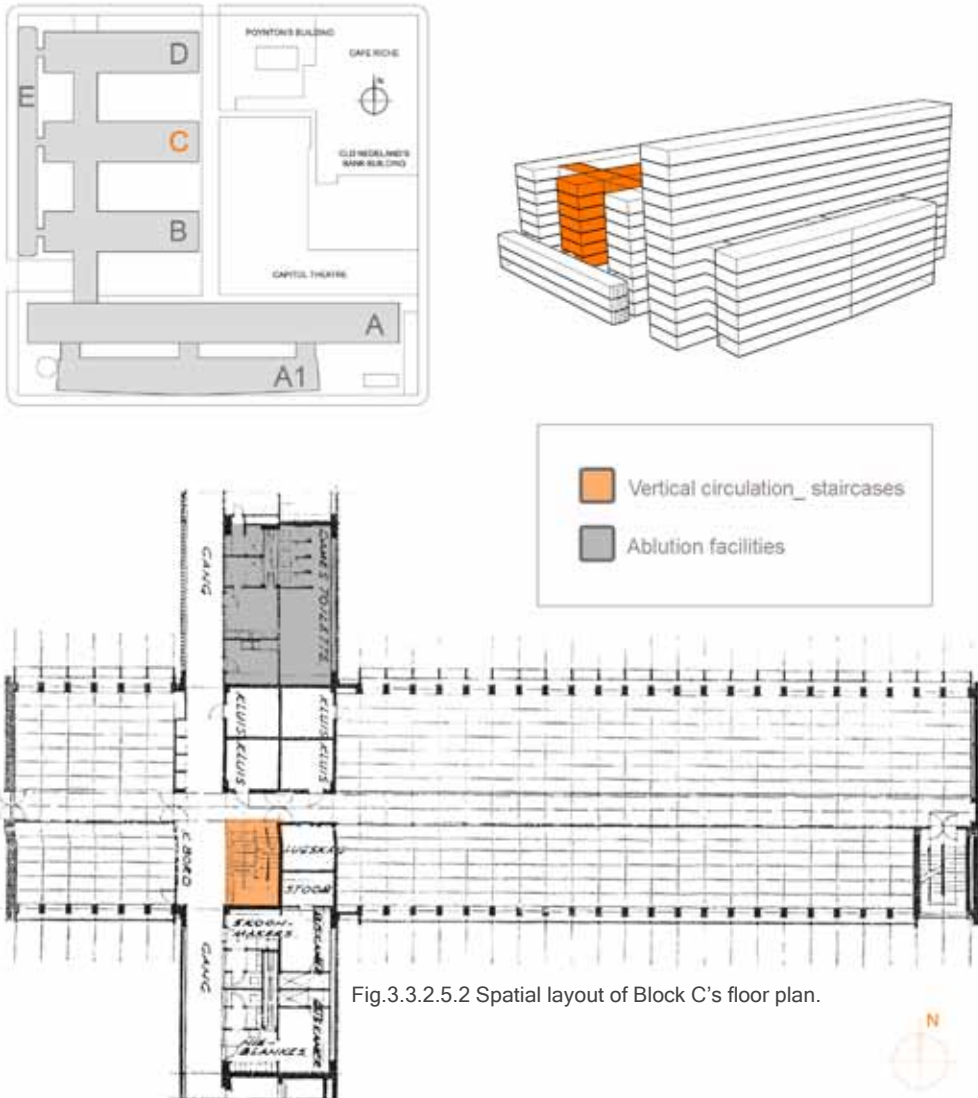


Fig.3.3.2.5.2 Spatial layout of Block C's floor plan.

3.3.2.6 Interior non load bearing partition walls_

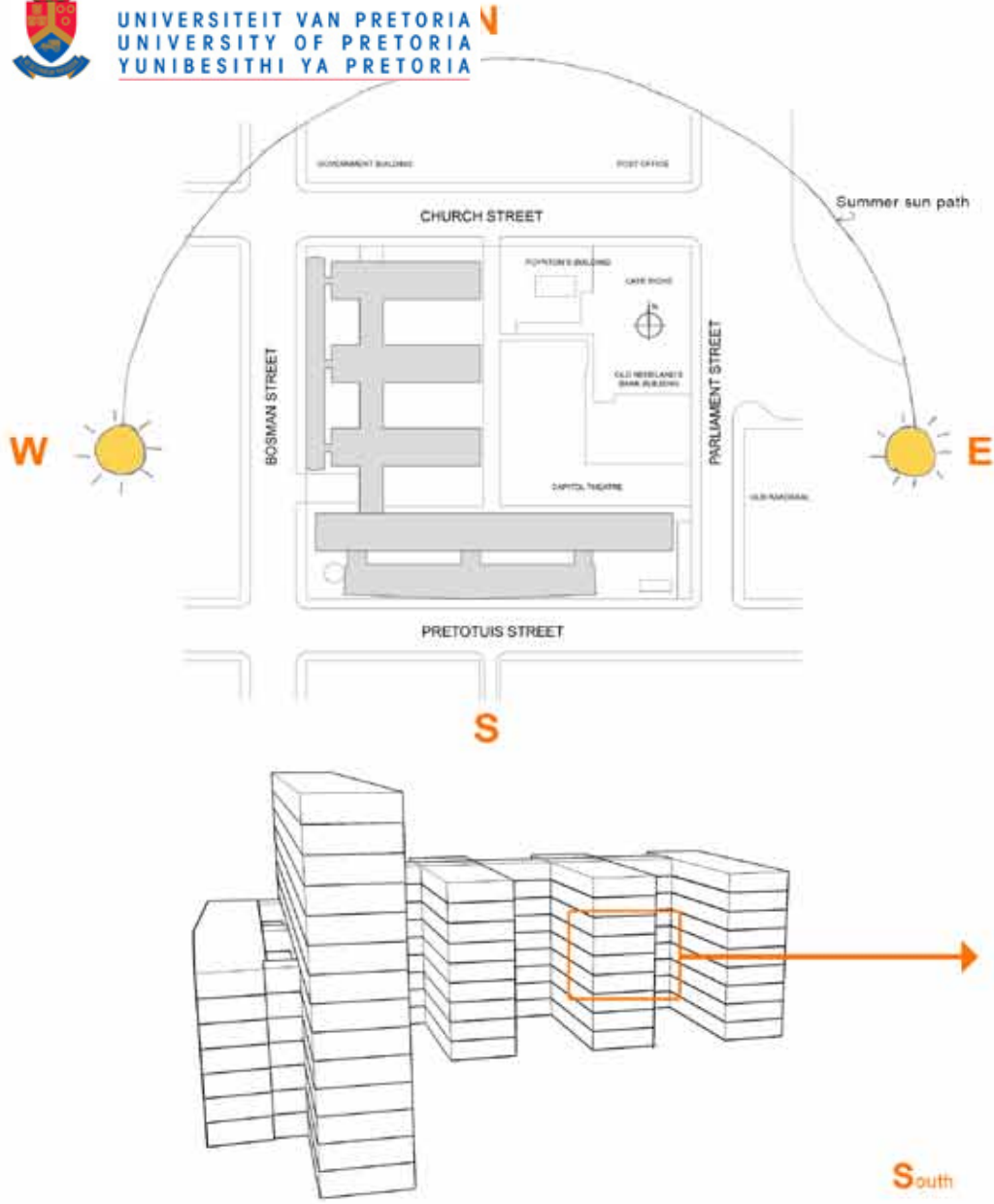
All interior partitions are made with laminated wood inside aluminium frames in 762mm width modules. The system is entirely adjustable. The partitions are 1,23m high with frameless glass panels connected to the ceiling. The aluminium frames are screwed together and 0.91 x 2,13m doors are able to fit in between the panels. The floor skirting is made of 76 x 762mm strips screwed to the partitioning panels.



Fig.3.3.2.6.1 Interior partition walls within the TPA building.

3.3.2.7 Suspended Ceilings_

The suspended ceilings are made out of perforated 762 x 1524mm gypsum board in an aluminium T-section frame suspended from the concrete slab with a rod and hook. In the corridors the ceiling is lower in order to house all the electrical cables for the air-conditioning and other systems. Lighting fixtures within the building consist of framed fluorescent light boxes substituting some of the ceiling panels. Light switches are positioned on columns for independent control of the lights in different quarters.



5.3.2.8 Tshwane's climatic conditions_

Path of the sun

At 12h00 solar time the vertical sun angle in Pretoria is as follows:

Summer_88°

Solstice_63.8°

Winter_40.4°

Reigning winds

Summer: East-North-Easterly to East-South-

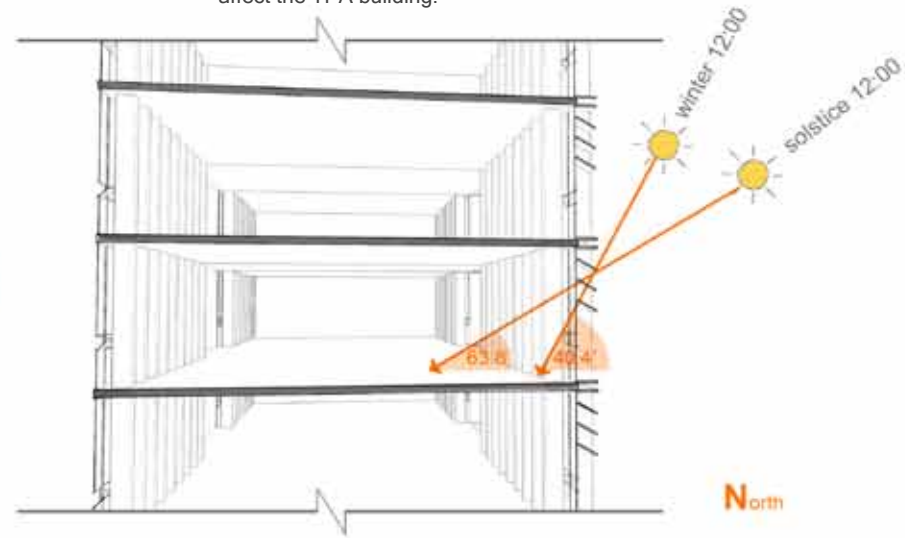
Easterly with 41% days breezy.

Winter: South-Westerly with some North-Easterly

and 60% breezy days.

[Holm, D. 1996. Manual for Energy Conscious Design.]

Fig. 3.3.2.8.1 Diagrams illustrating how climatic conditions affect the TPA building.



3.3.2.9 Curtain Walls_

The northern and southern facades of the building blocks consist of curtain walls which consist of anodized aluminium and glass. The window units are 3,7 m high and 1,5m wide with 1676 x 1524mm solid glass panels. Small lever windows are above the dark grey aluminium panel found underneath the window pane. On the northern side, the curtain wall extends a further 609.4mm due to the addition of vertical aluminium fins added for sun protection. Inside the vertical fins there are three adjustable horizontal aluminium louvers. The louver has grey aluminium on top to eliminate reflection and a dark green enamel layer on the aluminium on the bottom part. The three louvers are simultaneously adjustable by a handle which can be reached through the lever windows. Rainwater down pipes of 102 mm width are placed at 6m intervals between columns and the curtain wall. On the inside, a wooden panel is connected to the curtain wall underneath the window panes with insulation material in between. The wooden panels are removable elements which, when displaced, reveal three channels which are used for telephone lines or other requirements.

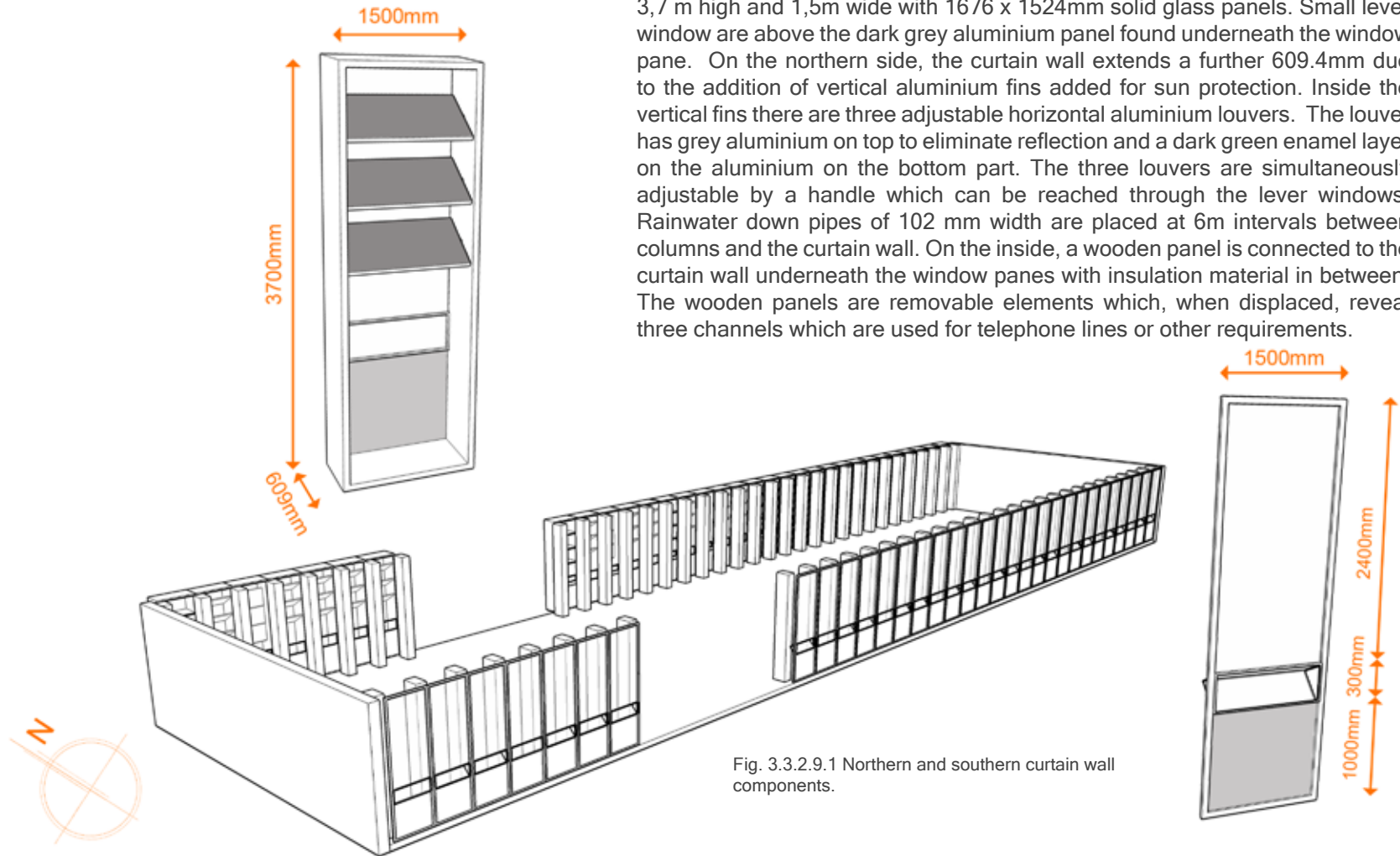


Fig. 3.3.2.9.1 Northern and southern curtain wall components.



Fig. 3.3.2.9.2 Outside of Block C's southern curtain wall.



Fig. 3.3.2.9.3 Outside and inside of Block C's northern curtain wall



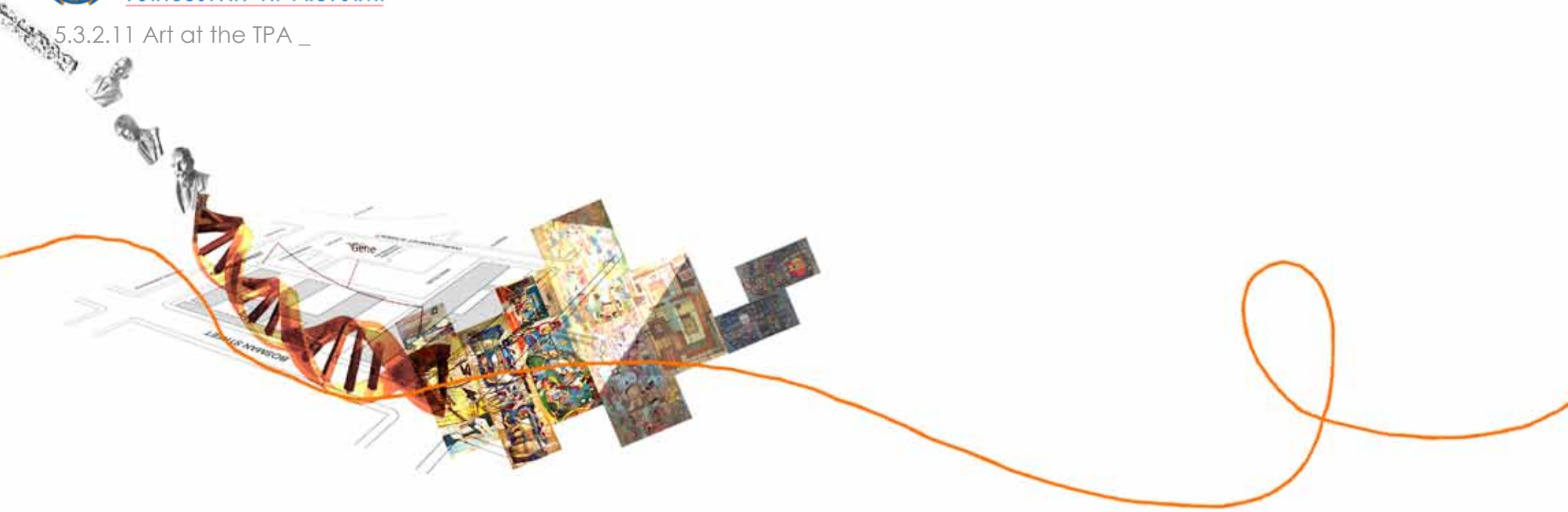
3.3.2.10 Courtyards_



Fig. 5.3.2.10.1 Courtyards in between blocks B,C and D.

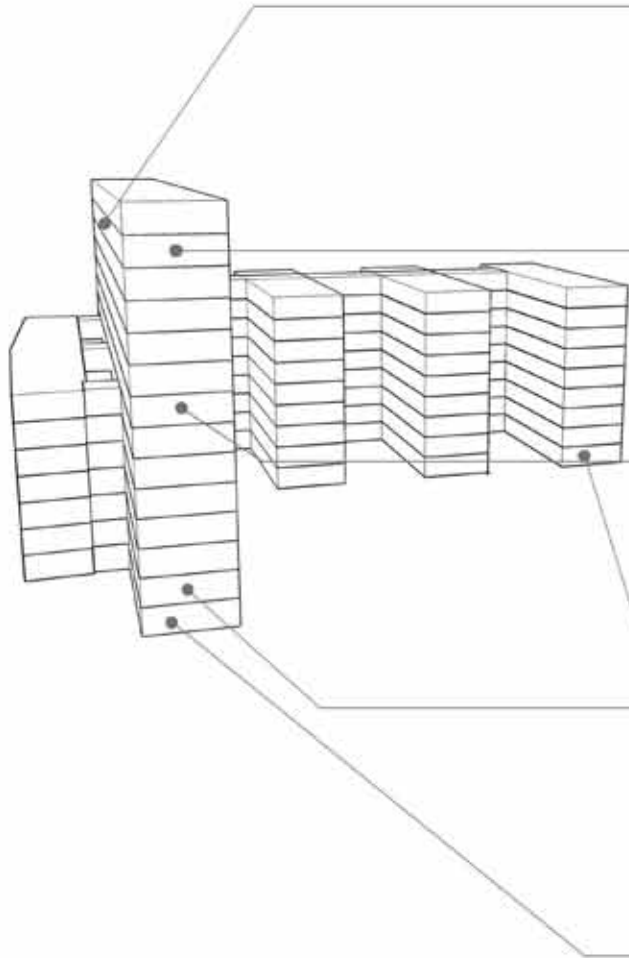


5.3.2.11 Art at the TPA _



The TPA building was not only an architectural icon in the sixties, but also housed a collection of art by some of South Africa's most well known artists. A brochure published in 1963 states the importance of the incorporation of artwork within the building: "From the outset it was felt that the building should not only fulfil a utility function but also satisfy the cultural needs of the community. With this in view, large amounts of money were made available to purchase works of art and to decorate the building as its erection progressed step by step." (Transvaal Provincial Government 1963)

The most significant works of art, mainly murals are found in the eight spacious committee rooms, named after the former administrators. Sculptures are also found throughout the premises.



Seekoeivlei_ Cecily Sash [1962]
Location: Block A, thirteenth floor, west.
Repair: Dust stains but in general good state of repair.



Sun and Sapphire_ Jeanne Kotze [1962]
Location: Block A, thirteenth floor, east
Repair: Considerably damaged by damp. Delaminating of contact surface and staining has occurred. In need of restoration.



Discovery_ Alexis Preller [1962]
Location: William Nicol Room, Block A, eighth floor, west
Repair: In good state of repair, with slight discoloration of lighter pigment.



Transvaal Sanctuary_ Walter Battis [1962]
Location: Bekker Room, Block A, second floor, east
Repair: Good state of repair



Bantu Africa_ Armando Baldinelli [1963]
Location: North 'Bantu' entrance, entrance Block A
Repair: Good state of repair

Day and Night_ Ernst de Jong [1962]
Location: Church Street entrance, Block D, west
Repair: In general good state of repair.

Fig. 3.3.2.11.1 Artworks in the TPA building.

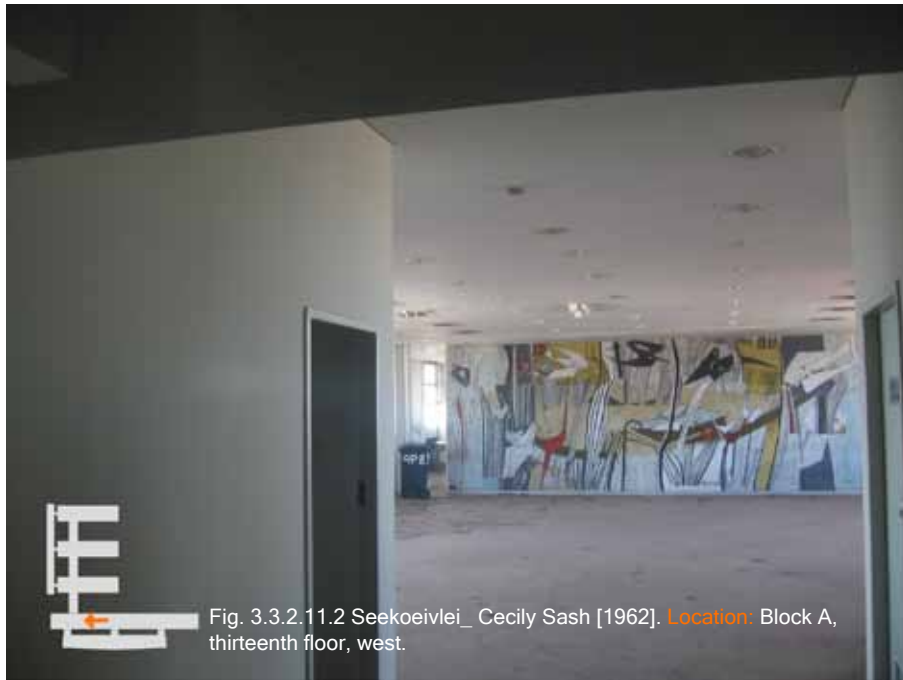


Fig. 3.3.2.11.2 Seekoeivlei_ Cecily Sash [1962]. Location: Block A, thirteenth floor, west.



Fig. 3.3.2.11.3 Day and Night_ Ernst de Jong [1962]. Location: Church Street entrance, Block D, west.





Striving_ Moses Kotter [1962]
Location: Corner of Pretorius and Bosman Street
Repair: Rust stains and cracking in podium base, in good state of repair.



Bust of State President: C. R. Swart_ Johanna Wassenaar
Location: Main entrance, Parliament Street.



Our Hope_ Coert Steynberg [1962]
Location: Main entrance, Pretorius Street
Repair: Some glass panels were removed and one figure slightly damaged by vandalism



The 'Glastoring'_ Coert Steynberg [1962]
Location: Corner Pretorius and Bosman Street
Repair: Good state of repair.

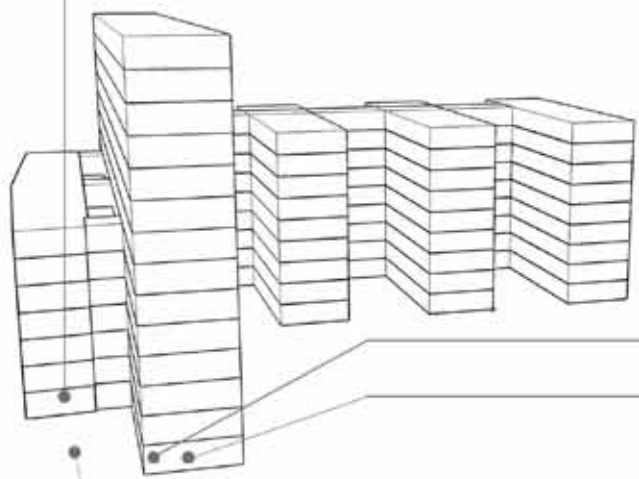


Fig. 3.3.2.11.4 Sculptures at the TPA building.



Fig. 3.3.2.11.5 Our Hope and The 'Glastoring_' Coert Steynberg [1962]
Location: Main entrance, Pretorius Street.



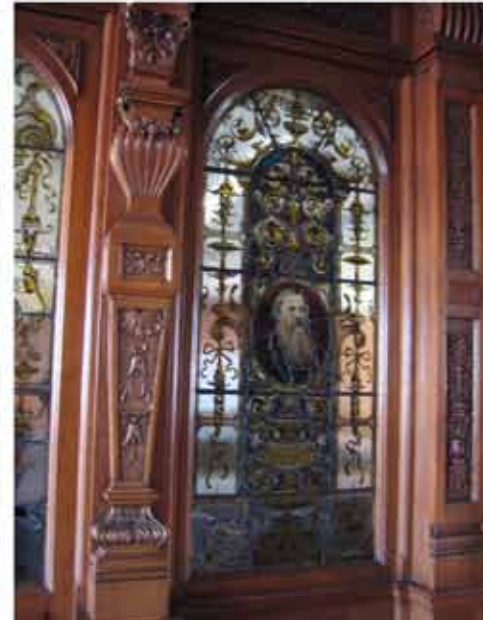
Fig. 3.3.2.11.6 Striving_ Moses Kotter [1962]
Location: Corner of Pretorius and Bosman Street



Another addition to the artworks present in the TPA building is the old Pretoria Chambers located on the western side of the eleventh floor in block A. The three rooms comprising the old chambers are covered with exquisite wood carvings and glass work. According to a brochure, The Provincial Building Pretoria, these artifacts, which display great artistry and grace were commissioned by the prosperous advocate W. E. Hollard for his home in Jacob Maré Street built in 1895. The panels and glass work were produced in London at a cost of R120 000 and shipped to South Africa. In 1955 the Hollard house was demolished and purchased by the Administration for R3750 (Transvaal Provincial Government 1963, p. 28). These decorative pieces stands in sharp contrasts to the rest of the TPA building's Modern design.



Fig.3.3.2.11.7The interiors of the Old Pretoria Chambers.





Bricks



Laminated wood



Linoleum tiles



Granite and Marble tiles



Granite



Glass



Marble



Travertine



Arberton



Mosaic



Parquet floors

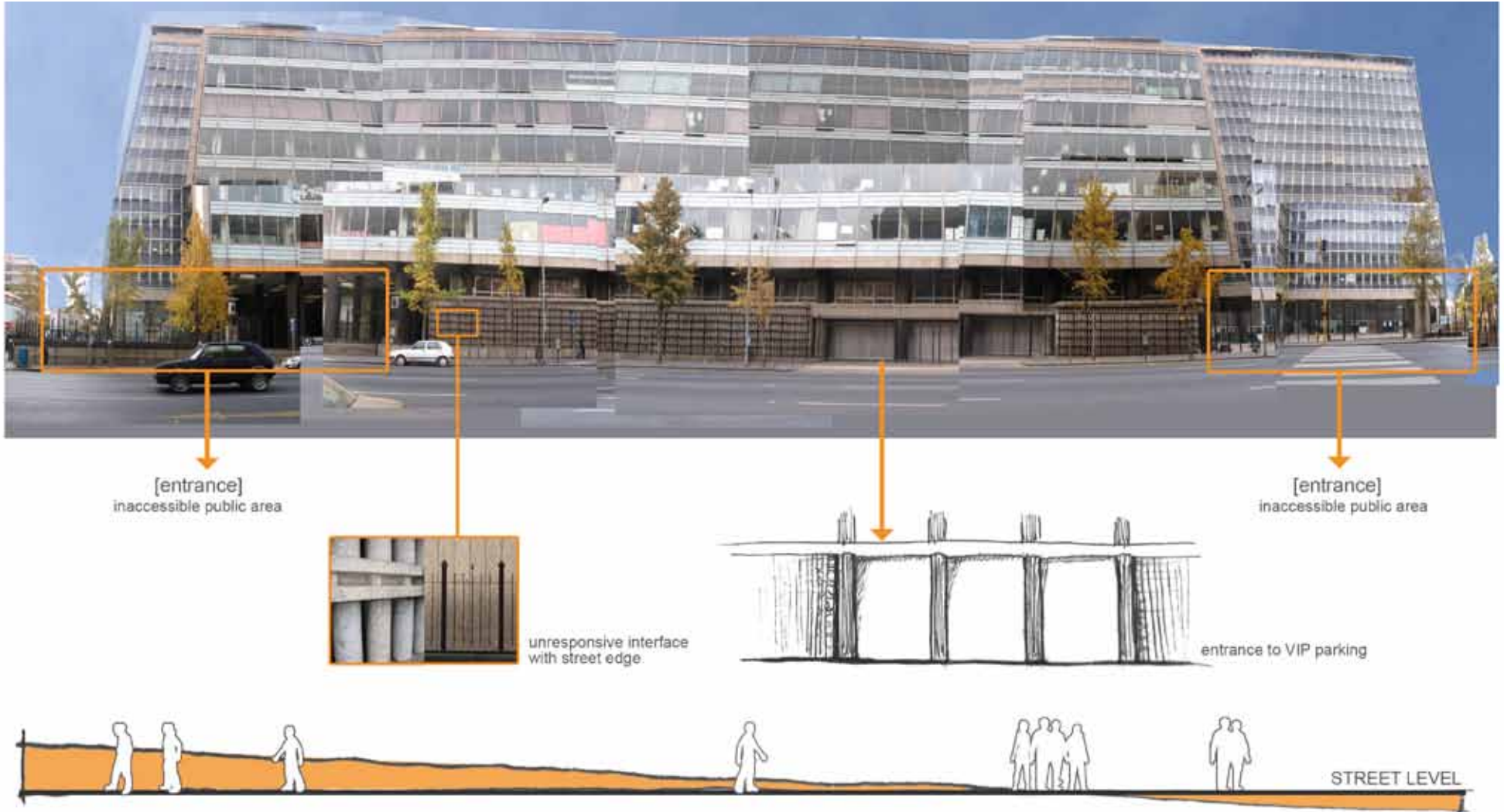


Aluminum

Fig.3.3.2.12.1 Palette of existing materials found in the TPA building.

3.3.2.13 Building interface with Pretorius Street_

The TPA building interface with Pretorius Street is unresponsive towards the public , exacerbated by the palisade fence surrounding the site.



3.4 The methodology of the analytical approach_

“We learn to see a thing by learning to describe it.” (Williams 1965, p. 39)

For Heidegger language was defined as the “House of Being” where men dwell. Norberg-Schultz (1996, p. 434) clarifies Heidegger’s theory in stating that language’s own nature is poetical, and when we use language poetically the house of being is opened up. For man to ‘dwell poetically’ he needs to listen, respond and open up to the language, and only then an authentic existence becomes possible. (1996, p. 436)

Poetry speaks in images, and for Heidegger the image is to let something be seen. For the purpose of this study, I transcend Heidegger’s textual language into the murky waters of a conceptual language. This conceptual language will be informed by the writings of Jorge Luis Borges’ speculative fictional work; *Tlön, Uqbar, Orbis Tertius*, where an imaginary language of the world called Tlön lacks nouns. Thus, the Tlönian equivalent of “the moon rose above the water”, will be “Upward behind the onstreaming it mooned.” In another Tlönian language, “the basic unit is not the verb, but the monosyllabic adjective,” which, in combinations of two or more, are noun-forming: “moon” becomes “round airy-light on dark” or “pale-orange-of-the-sky.”

(p.115 Borges, Jorge Luis. “Tlön, Uqbar, Orbis Tertius” Trans. Alastair Reid. *Borges, a Reader*. 111-122).

Applying a “Tlönian” language layer to the analysis of spaces will direct the focus away from the image of the existing, into the embedded phenomenological sensory dimension. By tapping into the inherent potential of associative memories the dissertation will attempt to lead you through the

Tlön, Uqbar, Orbis Tertius- Summey

In the fictional sort story, *Tlön, Uqbar, Orbis Tertius*, an encyclopedia article is found about a mysterious country called Uqbar. This discovery is the first indication of *Orbis Tertius*, a massive conspiracy of intellectuals who created an imaginary world called Tlön. An entire world was constructed with its own history, culture and even languages. Most of the ideas engaged in this short story are in the areas of epistemology, language and literary criticism. Through the course of the story, the narrator encounters increasingly substantive artifacts of Tlön and of *Orbis Tertius*. The story concludes with the Earth becoming Tlön.

edifice of the TPA building. To see, touch, smell, hear and ultimately feel the character of the space through a poetic description. This will further inform an understanding that poetry in architecture can be created without conscious attempts or even human intervention. Time and even abandonment, can create poetry.

A qualitative poem capturing the sensuous nature of the current state of the abandoned TPA building entitled; *The Forgotten*, is written in response to Borges conceptual “Tlönian” language. This poem aims to strengthen the experiential nature of the analysis of the TPA building.





Fig. 3.4.1 Graphical representation depicting the forgotten nature of the TPA building.

The Forgotten Carien Theart

The Gestalt of former glory towers up into the grey blueness overshadowing the Square.
Present at the centre of the heart yet forgotten by time.
Rejected,
left deserted.

The salute of daybreak glistens, gleams_ slides over the Modern glass curtain,
rhythmically creeping into the emptiness beyond the façade.
Settling in silence.

Resonating: durability, presence, integrity.

The layered tangible grey lies naked,
exposed by the translucent streak of daybreak.

GREY, the mark of the forgotten.

Etched onto the decaying immortal flesh
Comprised of marble, stone, brick held by mortar
silently waiting, almost serving

Forgotten words of power bounce and echo.....
bounce and echo through the wide dark pathways,
settling on private conversations forever embedded in empty rooms.
Silence's only companion is the city's slow walking whisper,
distantly JINGLing,
filling the void.

The towering Forgotten, speaks without shouting:
Remember.

A secondary argument for a qualitative approach is Geoffrey Scott's observation (1954): There is a distinction between how big a building appears to be and how big it actually is. Only the former deals with the aesthetic experience. Therefore, he warns us not to accept the standard of architectural beauty derived from visual criteria alone as our only source.

This approach of Scott corresponds with the dissertation premise that our bodies contribute to our spatial and temporal perceptions. Consequently the senses biologically grounded in our bodies contribute significantly to our perception and experience of architectural spaces.

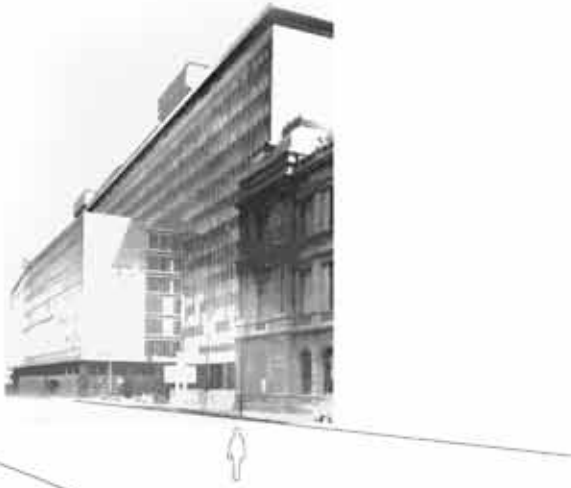


Fig. 3.4.2 The bigness the TPA building actually has.



Fig. 3.4.3 The bigness the TPA building appears to have

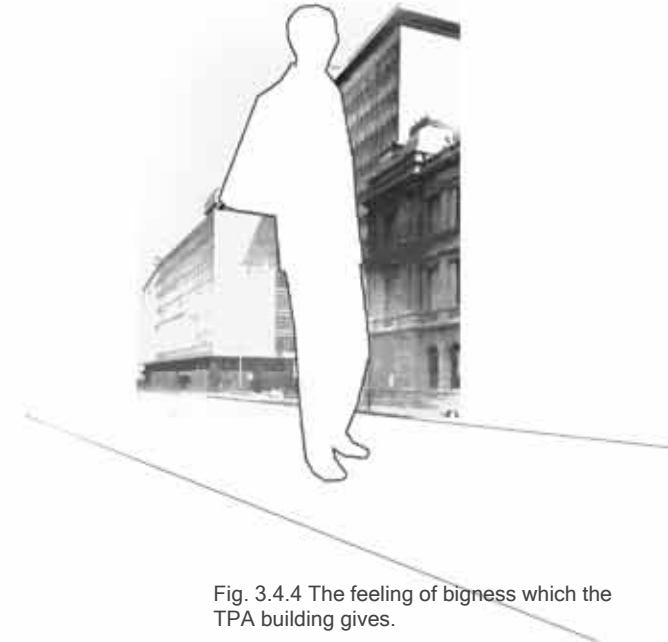


Fig. 3.4.4 The feeling of bigness which the TPA building gives.

3.4.1 Qualitative analysis of materials in the TPA building_

The concrete, sensuous quality of materials enables architecture to transcend abstract theoretical assumptions into reality, where architecture consists of tangible things. This idea is strengthened by Zumthor's (1998, p 37) account that "the reality of architecture is in the concrete body in which forms, volumes, and spaces come into being. There are no ideas except the things."

Materials in themselves are not poetic, but I believe that each material has its own expressive language and can assume a poetic quality in the context of architectural structures. Their smell, acoustic properties and tangibility are all qualities embedded into their language, and for the language to be truly understood, materials must be applied in a meaningful way.

This thesis strives to continually ask: what could a specific material mean in a particular architectural context? Answers to such a question can enhance the way in which materials are generally used and offer the inherent sensuous qualities of materials a more integrated role in the design.

3.3.1.1 Experiment_

A study was conducted to determine the strength of the assumption that the sensuous qualities of materials can influence the way spaces are experienced. Three individuals were asked to map their spatial experiences in different parts of the TPA building according to a bar scale based on the five primary senses; sight, hearing, smell, taste and touch. By mapping the information gained from the experiment into a visual context, the overall experience of specific spaces was determined, see Fig 3.4.1.1. This palimpsest was further interpreted in relation to the materials present in each of these areas. According to these findings possible solutions involving the contemporary equivalent of some of the materials were suggested to enhance the overall feeling of the spaces.

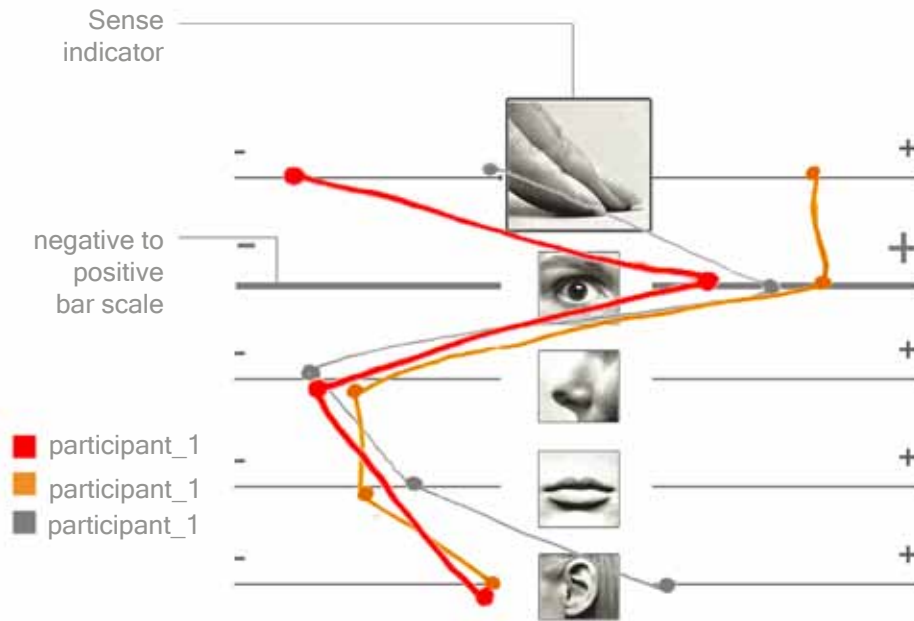


Fig. 3.4.1.1 Explanatory diagram of the experiment conducted to determine the relation between sense and spatial experiences.

Experiment analysis_one | 13th Floor_Cafeteria area

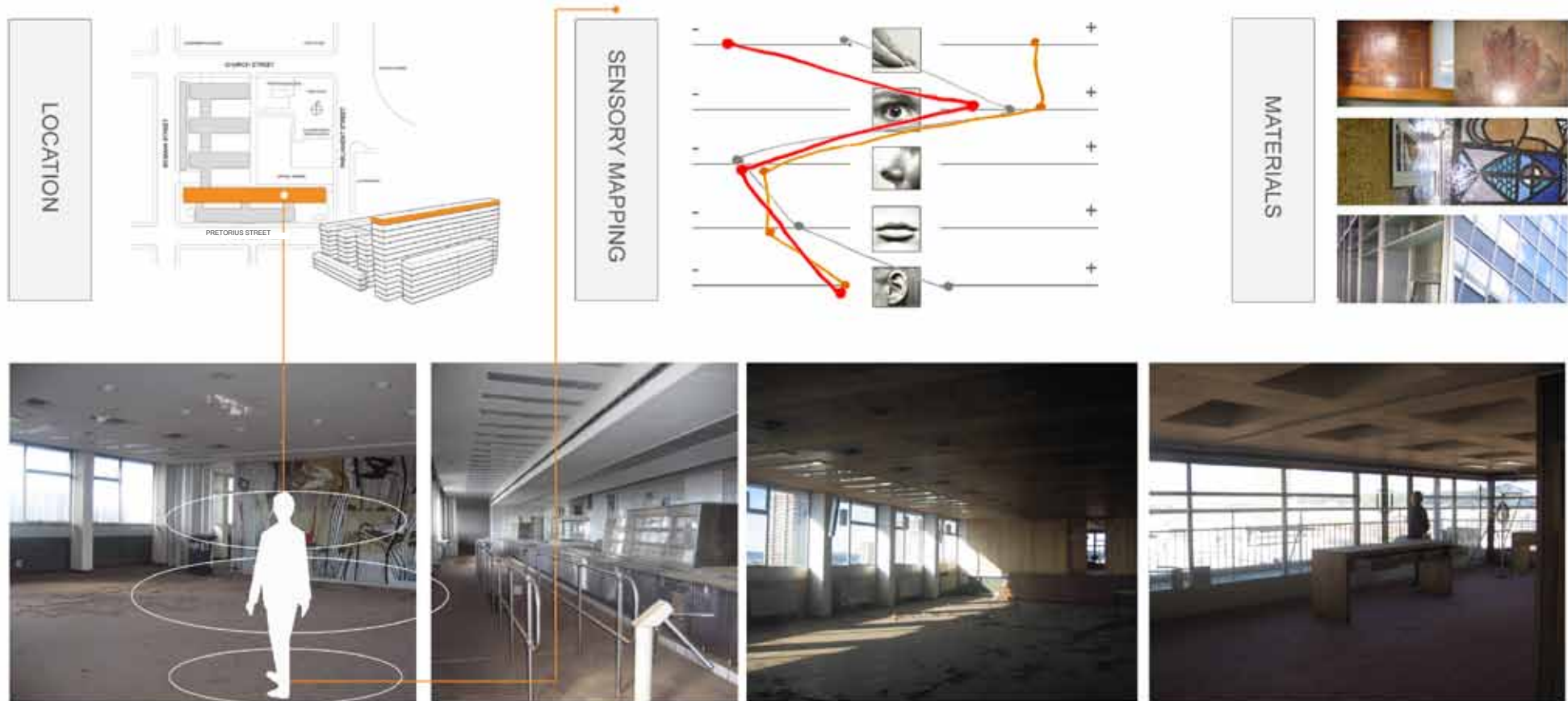


Fig 3.4.1.2 Experiment analyzing the sensory quality on the 13th Floor of the TPA.

Experiment analysis_ two | Courtyard between block C and D

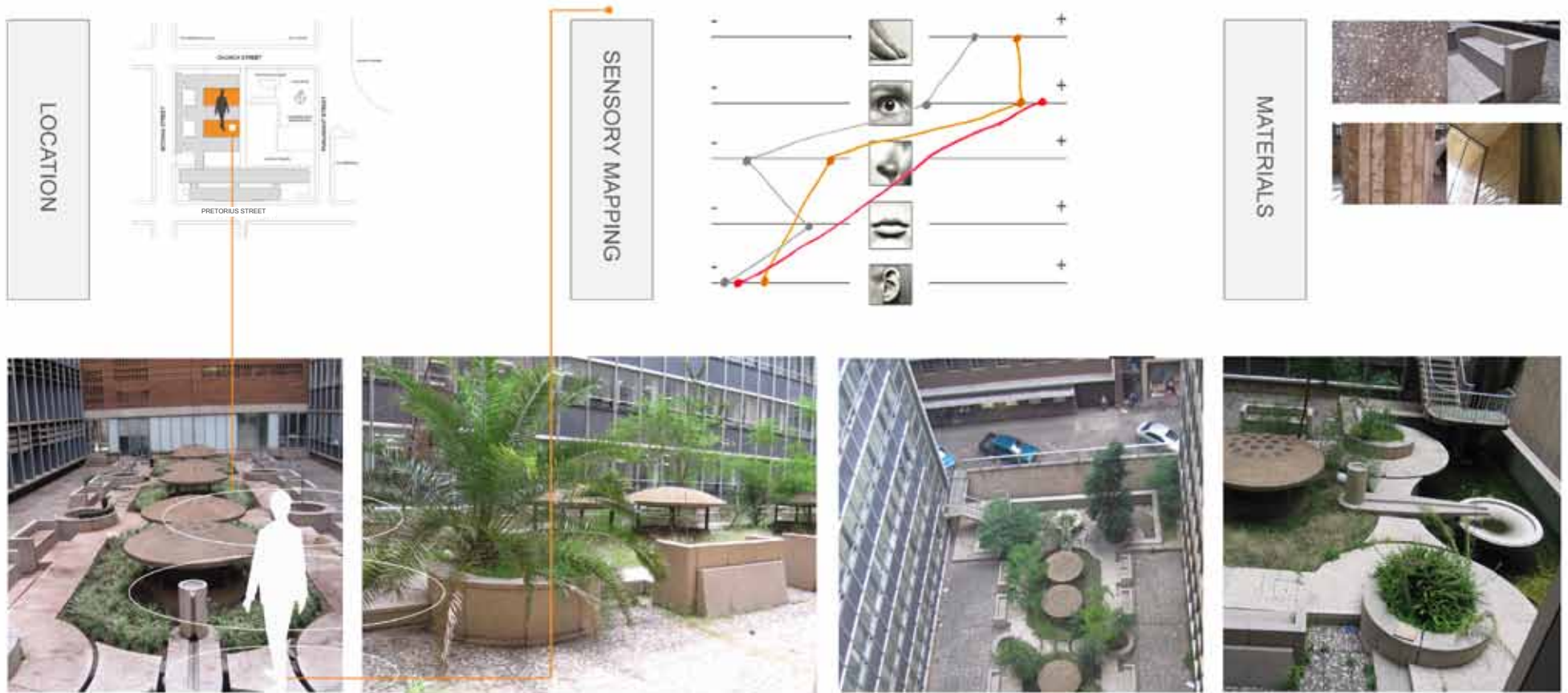


Fig 3.4.1.3 Experiment analysing the sensory quality of courtyards at the TPA.

Experiment analysis_three | Block D_ Church Street entrance

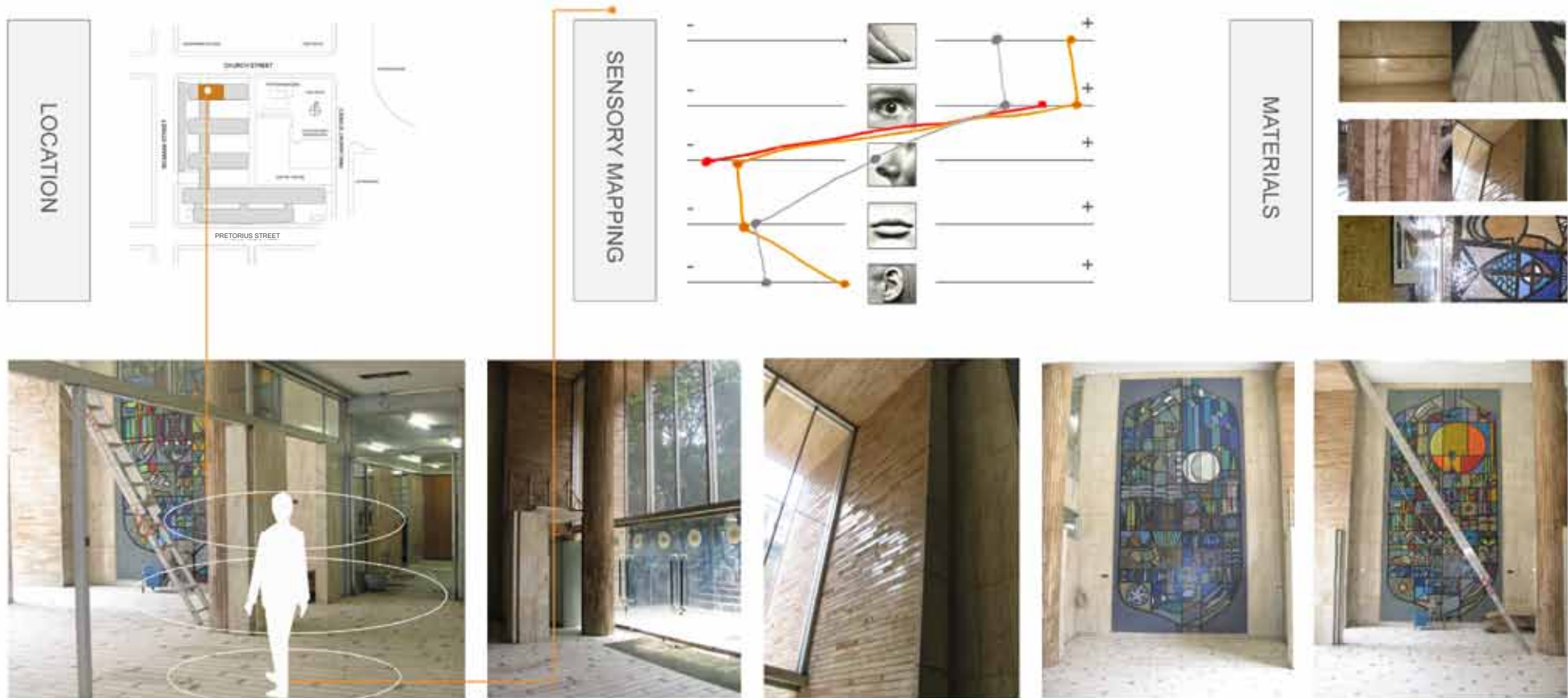


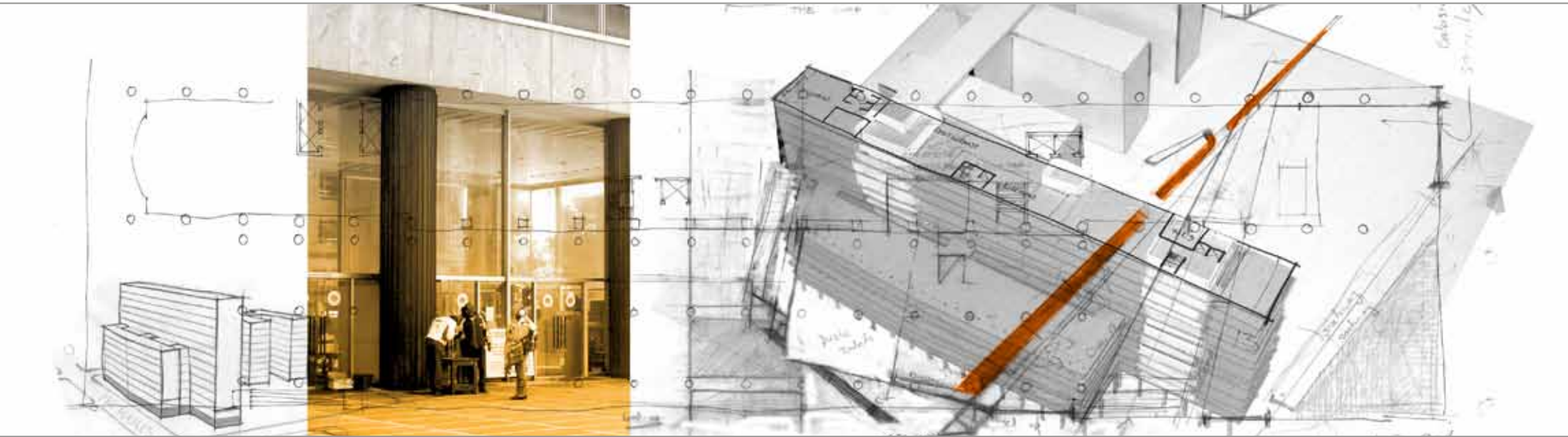
Fig 3.4.1.4 Experiment analysing the sensory quality at the Church Street entrance of the TPA



CHAPTER

Design Discourse

Chapter four illustrates the formulation of a concept, translated into a final design.



4.1 Design development _ part one

The connection between Pretorius Street and Church Square played an important role throughout the design process. The introduction of a rectilinear line slicing through the corner, unifying the two elements became a guiding force within the design and is illustrated in Fig 4.1.1 & Fig 4.1.2.



Fig. 4.1.1 Line introduced to connect Pretorius Street with Church Square.

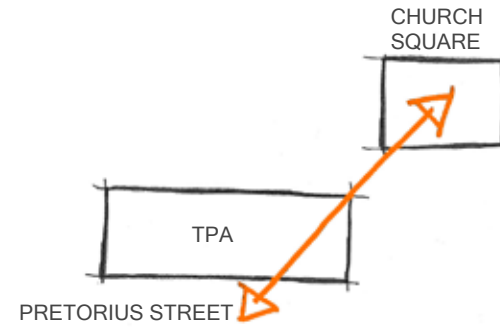


Fig. 4.1.2 Parti diagram depicting the central concept of the design.

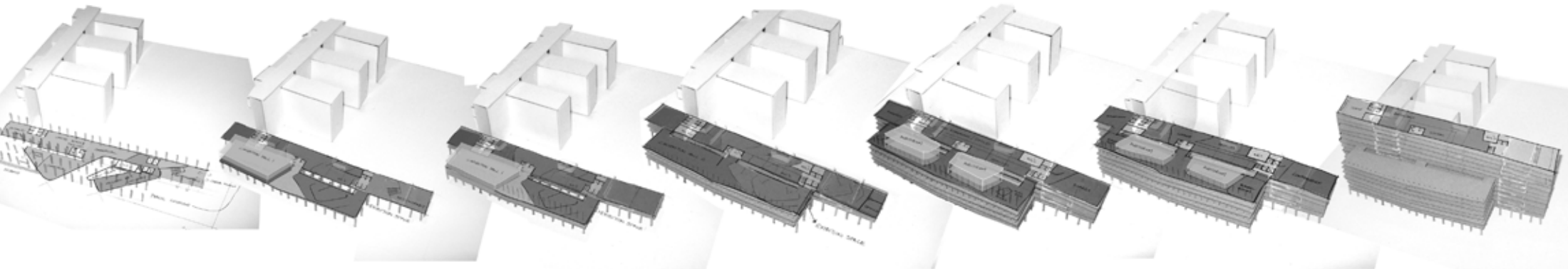


Fig. 4.1.3 Investigation of possible placement of new programs within the TPA.

Design Development

April

May

June

July

August

September

October

November

The proposal of adaptively re-using the TPA building exposed the inadequacies and aspirations of its Modern design narrative. In response to this strong language consisting of linear lines, a fluid form was introduced. Flow, penetrate and protrude through the TPA's Modern skin.

This form introduced within the existing structural membrane of the TPA building, tried to imitate the sensuous nature of a body moving through space. The skin responds to texture, sound and form.

FLOTSOM

Objective: Vertical public corridors in the grid of existing buildings.

Description: Experimental BVA 1 project

Designer: Wolfgang Tschapeller

Date: 1998

Flotsom proposes the creation of vertical public spaces within a typical sixties office building. Pieces of floor area are sold that carry a percentage of public space, resulting in small public cells caught in the grid like flotsam.

Reference: Foster, K. 2005. Wolfgang Tschapeller. In 10x10 2. London: Phaiosn Press. p. 376-379.



Fig. 4.1.4 Model of fluid form introduced within the TPA's structure.

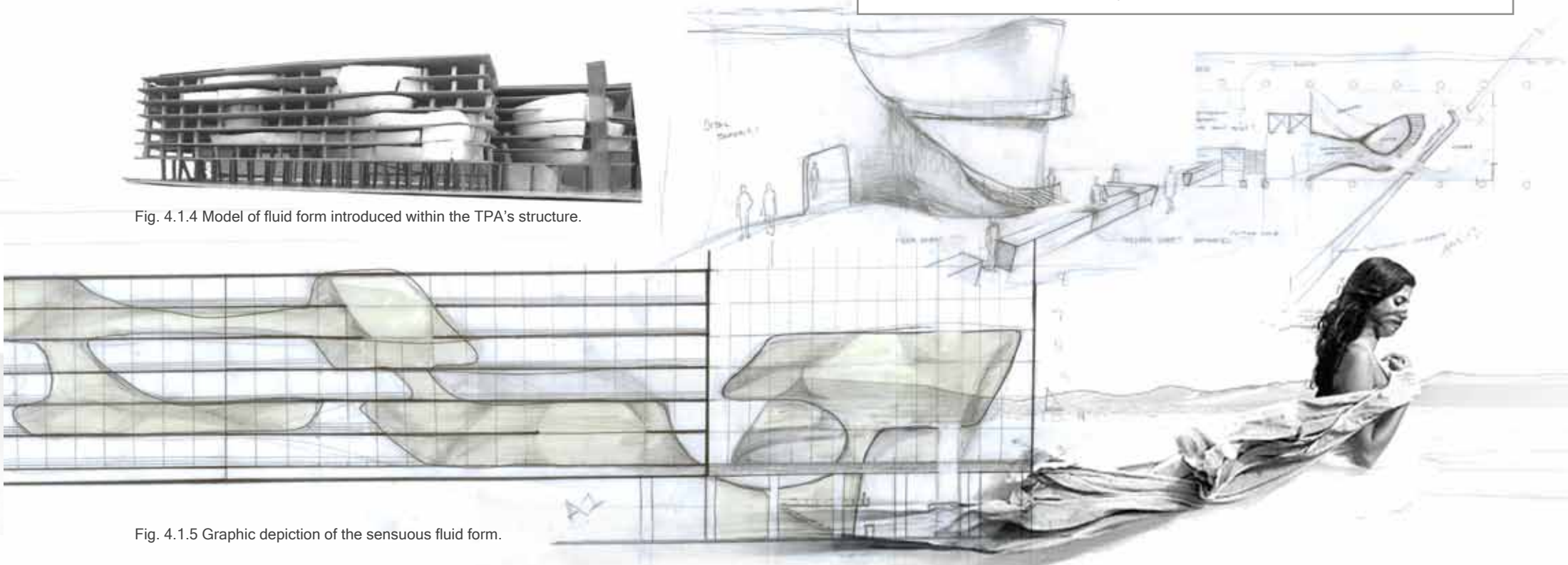


Fig. 4.1.5 Graphic depiction of the sensuous fluid form.

The concept of the fluid form within the building evolved into the body that accommodates the design proposal, of the new facilities for the Pretoria Art Association. Contextual precedents were selected and investigated to inform the design proposal.

This fluid body, within its rectangular container has the potential to be a beacon within the city fabric of Pretoria if illuminated at night. The voluptuousness of the curved volumes creates interior spaces which guide the visitor along a sensuous path through exhibition areas illustrated in Fig 4.1.6.

The fluid form could possibly be made of a mixture of resin and glass, with changes in consistency and ranges from transparent to translucent to opaque depending on the required light quality of the area. The liquid surface appears wet and further enhances the sensuous experience of the space.



Fig. 4.1.6 Drawing depicting the fluid forms within the TPA building.

4.2 Contextual precedent_

The following contextual precedents explore three art galleries acting as public spaces within cities.

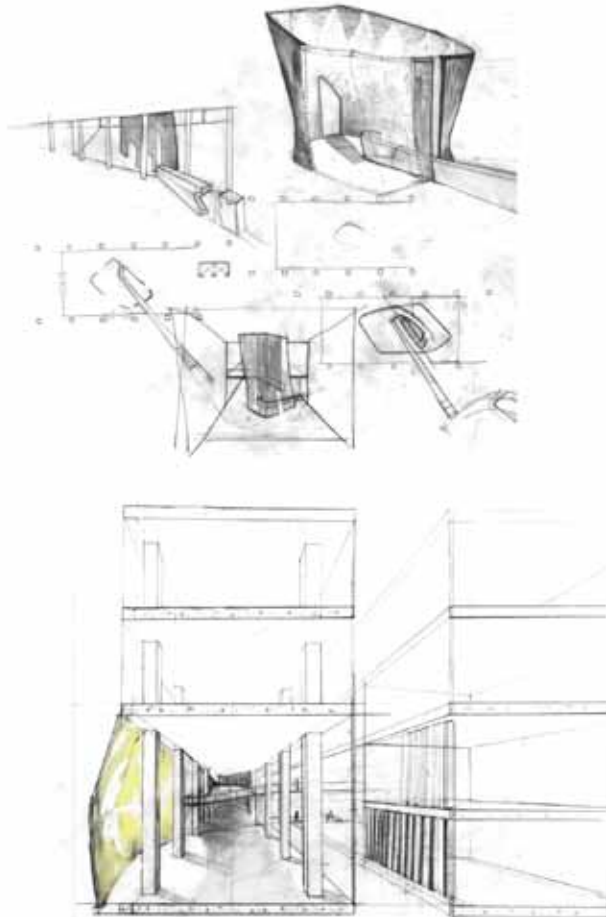


Fig. 4.1.7 The special quality of the interior, created by the voluptuousness of the curved volumes.



Fig. 4.2.1

ROSENTHAL CENTRE FOR CONTEMPORARY ARTS

Objective: Urban rejuvenation through a contemporary design, incorporating the idea of urban verticality.

Description: Centre for Contemporary Arts

Place: Cincinnati; United States

Designer: Zaha Hadid

Date: 2003

The Lois & Richard Rosenthal Centre for Contemporary Arts (Fig. 4.2.1) is located in Downtown Cincinnati and functions as an urban building housing artworks. The new Arts Centre succeeded to reaffirm some of the urban values of the



Fig. 4.2.2re

fast deteriorating fabric of Downtown Cincinnati. Hadid captured some of the rhythms of the heartland city through the fluctuation of extremes. The fluid nature of the interior directly contrasts the exterior, comprised of a series of irregular shaped, stacked and interlocking galleries.

The building is positioned between a block-long parking garage, commercial buildings and a performing art centre. "The surface of the street flows into the building and curves up into a dramatic vertical circulation, creating a continuous zone, L-shaped in section, of urban activity" (Moore 2003, p.36) The

architecture figuratively grows out to the street as the idea of vertical urban space is manifested through the dissolution of perceptual boundaries, illustrated in Fig 4.2.2. The centre's street interface is further enhanced by the glazed lobby, framing uninterrupted views inviting the public to enter.

Design Influence:

Hadid's design responds to its Cincinnati surroundings in a contemporary fashion, resulting in urban rejuvenation.

Pretoria CBD is an example of a city centre rapidly degrading due to the gradual emigration of businesses to the eastern suburbs. Incorporating Hadid's design approach concerning the Contemporary Arts Centre, in the context of a design proposal in Pretoria, may imply urban regeneration possibilities and the activation of dead street edges.

Fig. 4.2.1 Rosenthal Centre for Contemporary Arts situated in Downtown Cincinnati.

Fig. 4.2.2 The Urban Carpet curving up dramatically into the vertical circulation.

Reverence: Moore, R. 2003. Zaha Hadid in America. Domus. July-August 2003. Issue 861, p.28-43.

Unknown, 2003. Instant Icon. Architecture. Volume 92, Issue 8, p 39-47.

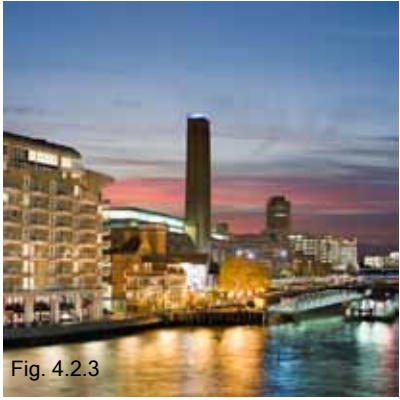


Fig. 4.2.3

TATE MODERN

Objective: The adaptive re-use of the Bankside Power station.

Description: Art Museum.

Place: London Bankside; United Kingdom.
Designer: Jacques Herzog and Pierre de Meuron.

Date: 1998-2000.

The Tate Modern is a celebrated example of a building which has been adaptively reused. The enormous art museum rests in the shell of the Bankside Power Station, designed in 1947 by Sir Giles Gilbert Scott on the Thames River.

Herzog & de Meuron's design respects the original architecture, referred to as the industrial cathedral. The old power station's turbine room now serves as a sizeable exhibition hall directing movement by way of a ramp to temporary exhibitions held in the adjacent boiler zones. The experience of the gigantic turbine room illustrated in Fig. 4.2.4, is further enhanced by the illumination from

above created by 524 glass panels. A two storey glass structure forms the roof of the power station and heightens the building's presence.

Design Influence:

The placement of the Tate Modern Art Museum within the decaying power station has not only given the building a new lease on life, but resulted in the transformation of the surrounding area. I hope to apply these same principles of respect for the existing structure while introducing a new function within the TPA building.



Fig. 4.2.4

Fig. 4.2.3 Tate Modern on the Thames River in London.

Fig. 4.2.4 The Turbine hall.

Reference: Paredes, C. 2006. Tate Modern. In *Industrial Chic - Reconverting Spaces*. Italy: Arti Grafiche DIAL. p. 28-37.



Fig. 4.2.5

EVERARD READ ART GALLERY

Objective: Cosmopolitan art gallery exhibiting South African art.

Description: Art Gallery.

Place: Rosebank, Johannesburg.

Designer: Meyer Pienaar & partners

Date: 1980

The Everard Read Art Gallery is purpose-built with exhibition areas designed in various sizes with clerestory windows ensuring abundant daylight. A series of sculptured courtyards connected to the building exterior extends some of the exhibition space to the outside and draws the outdoors in. The interior quality created by the relationship between the indoor and outdoor space is illustrated in Fig. 4.2.5.

Fig. 4.2.5 An indoor circulation route indoor exhibition spaces on to the left and sculptured gardens to the right side.

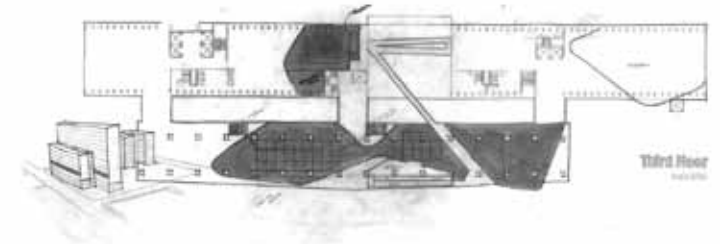
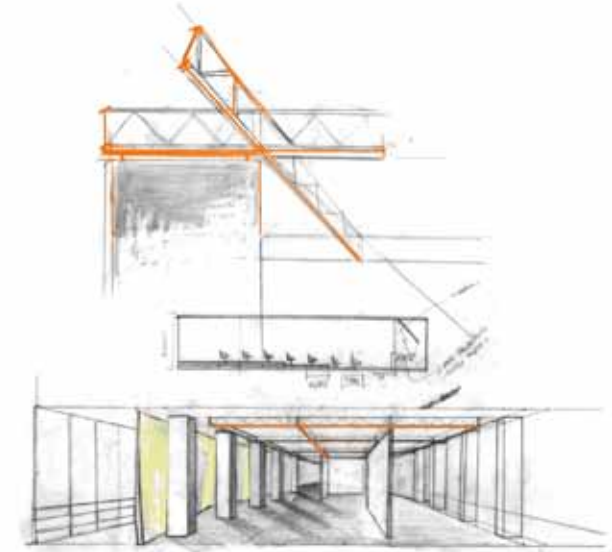


Fig. 4.1.8 Adjustable exhibition boards can be arranged according to the requirements of individual artworks.

4.3 Design development _part two

Block A of the TPA building has two vertical circulation cores consisting of lift units and fire staircases on the eastern and western side of the building and an additional service core in the middle, illustrated in Fig 4.3.1.

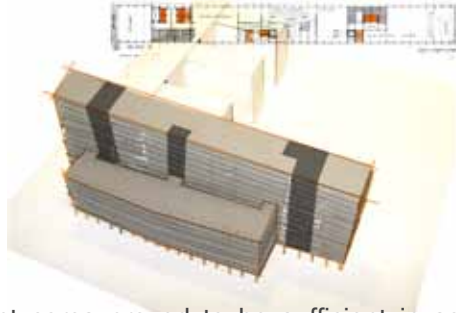


Fig. 4.3.1 The TPA's existing vertical circulation cores.

These vertical movement cores proved to be sufficient in serving the government's administration department but are inadequate for the design proposal of a conference centre and arts facility amongst others.

A new circulation core is introduced in the centre of the building, with the dual function of providing additional vertical circulation and emphasizing the difference of the proposed two new programs. This element, referred to as the GAP, slices through the existing structure, forming a large atrium space with a series of ramps connecting various floors with each other, illustrated in Fig. 4.3.3.

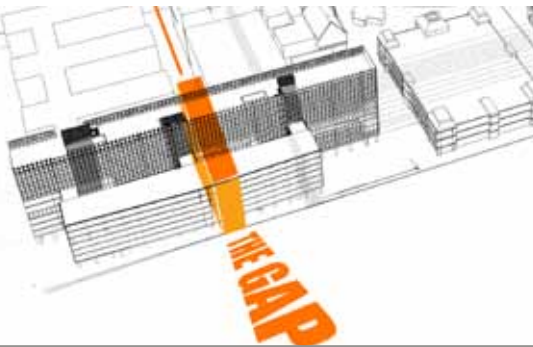


Fig. 4.3.2 The GAP slicing through the centre of the building is introduced to provide additional vertical circulation.

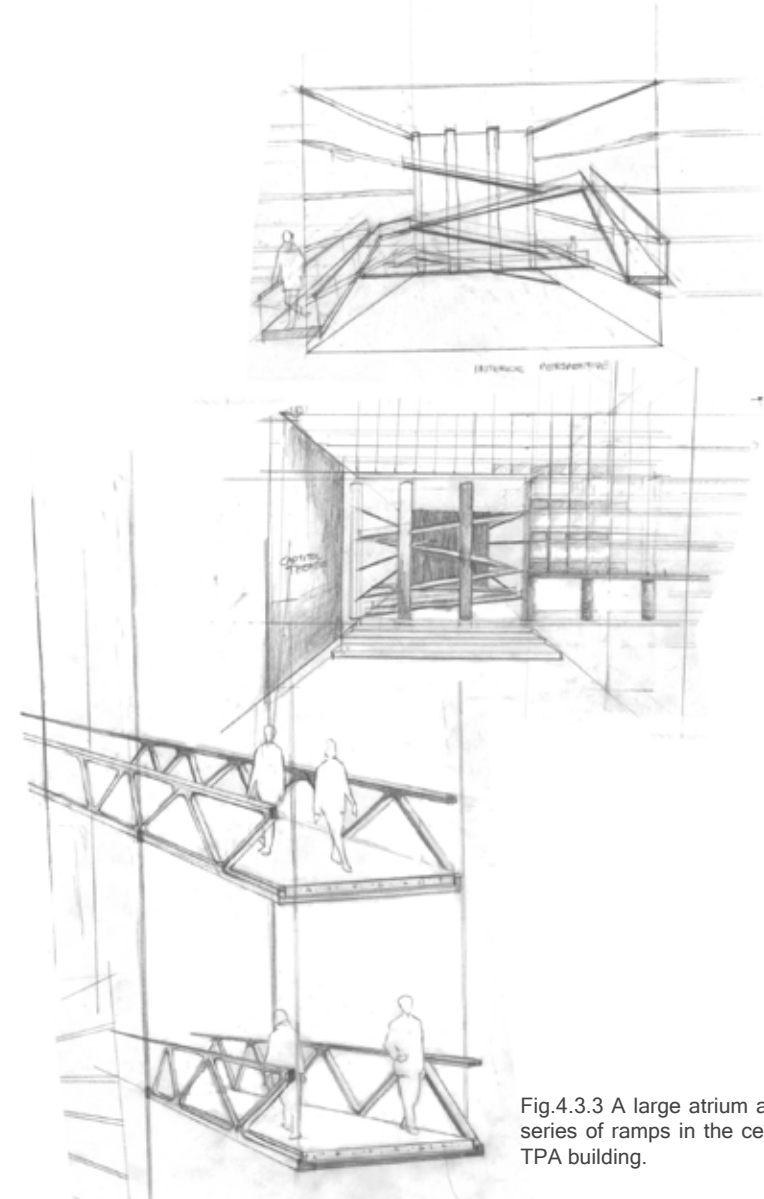


Fig.4.3.3 A large atrium area with a series of ramps in the centre of the TPA building.

4.4 Design development _part three

The subsequent design concept returned to the parti diagram, emphasizing the need to connect Pretorius Street with Church Square.

The concept introduces rectilinear lines slicing through the building's linear form, drawing people into the area by activating the Pretorius Street front. "The GAP" extends to the ground floor, cutting through the structure and forming a pathway that connects Pretorius Street with Church Street. This thoroughfare responds to Fountain Street, an existing secondary street.

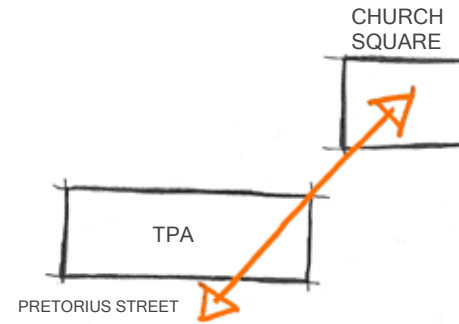


Fig. 4.1.1 The Parti diagram.

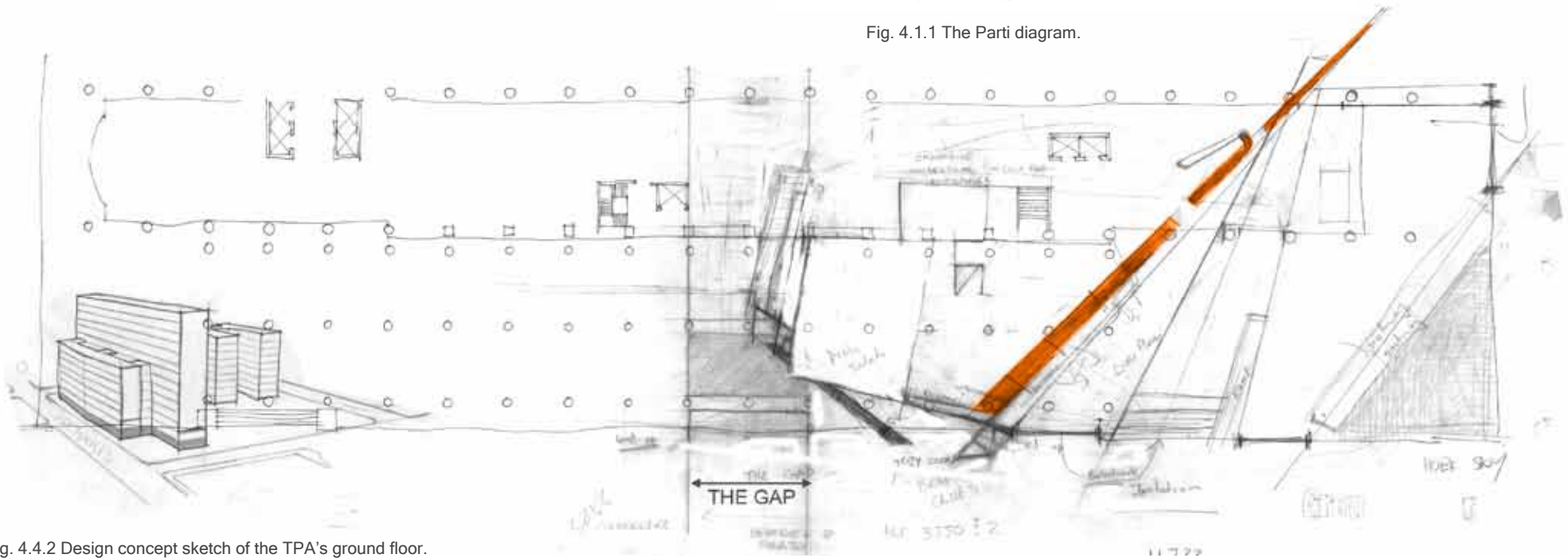


Fig. 4.4.2 Design concept sketch of the TPA's ground floor.

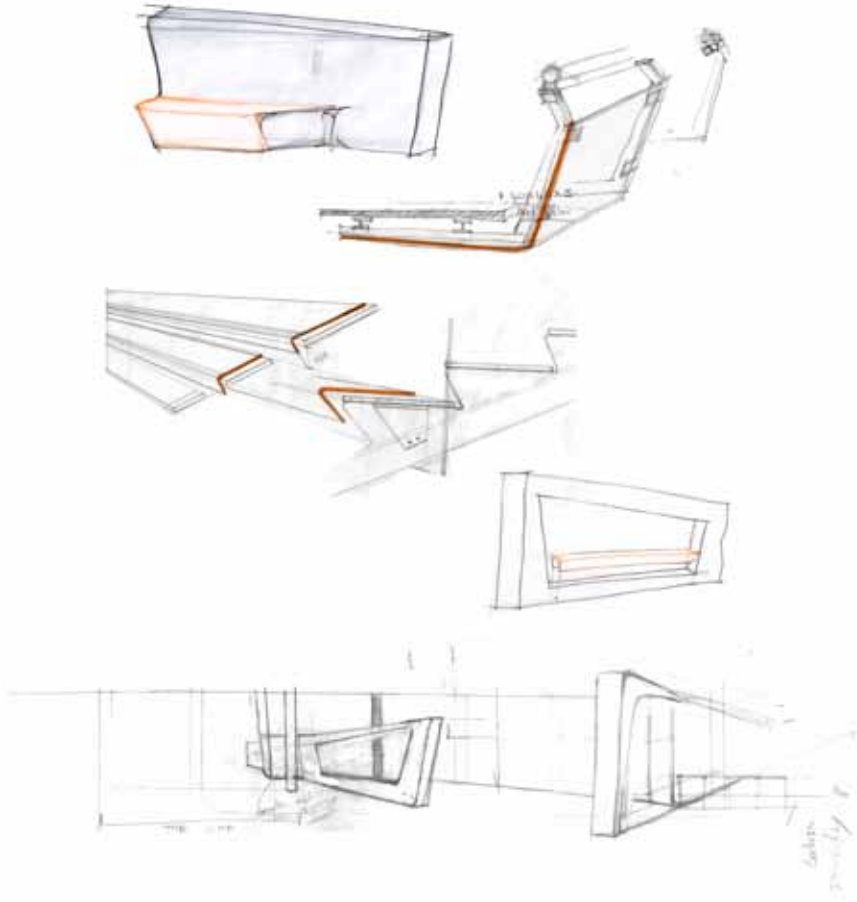


Fig. 4.4.3 One material, wraps around another material with contrasting qualities.

The design explores the sensuous qualities embedded in materials by placing them in tension. Cold hard concrete is placed in contrast with wood, which has a natural warm feeling. This principle of materials in tension is explored throughout the design to enhance the sensuous experience of the visitor. One material enfolds another and indirectly softens the experience where body meets object. (See Fig. 4.4.3)

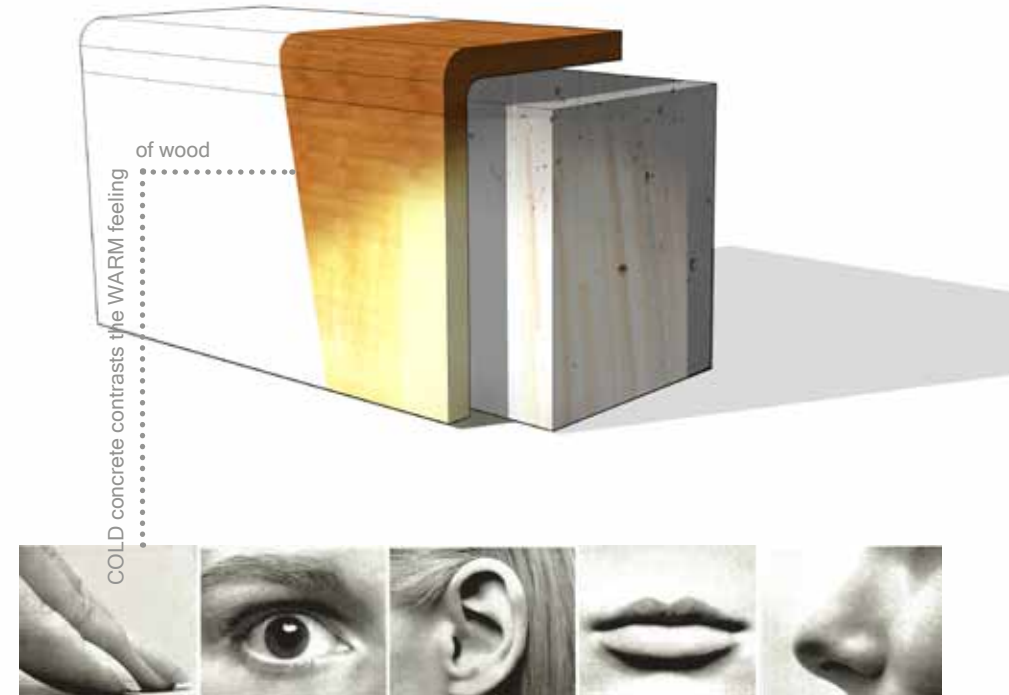
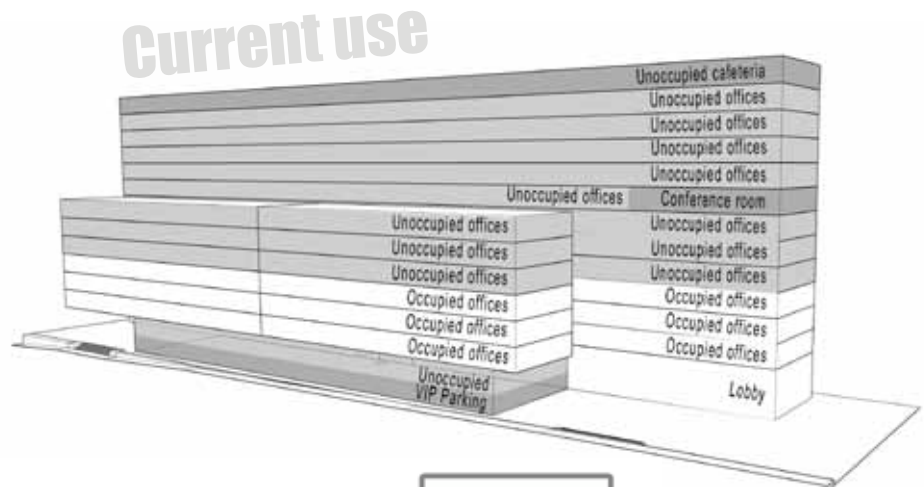
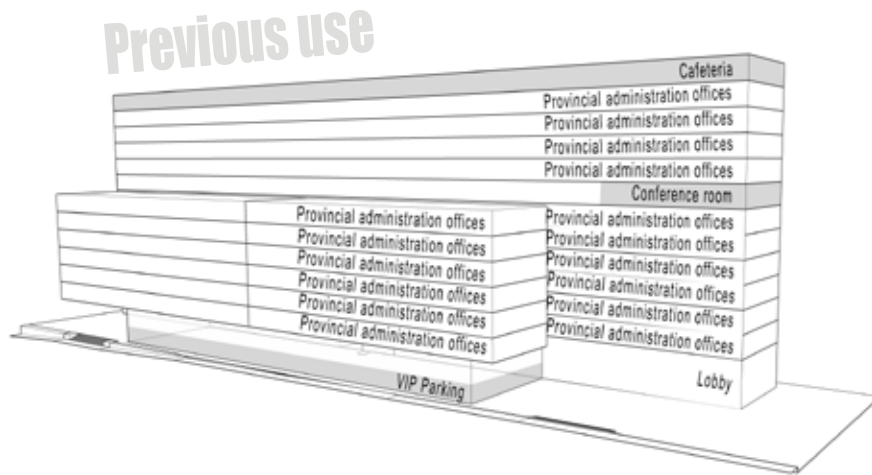


Fig. 4.4.4 Material application concept.

4.5 Final Design_

4.5.1 Design framework_



1963-1996

Fig. 4.5.1.1 Block diagram illustrating TPA buildings previous accommodation schedule.



1996-2009



relocation

Fig. 4.5.1.2 Block diagram illustrating TPA buildings current accommodation schedule.

Proposed use

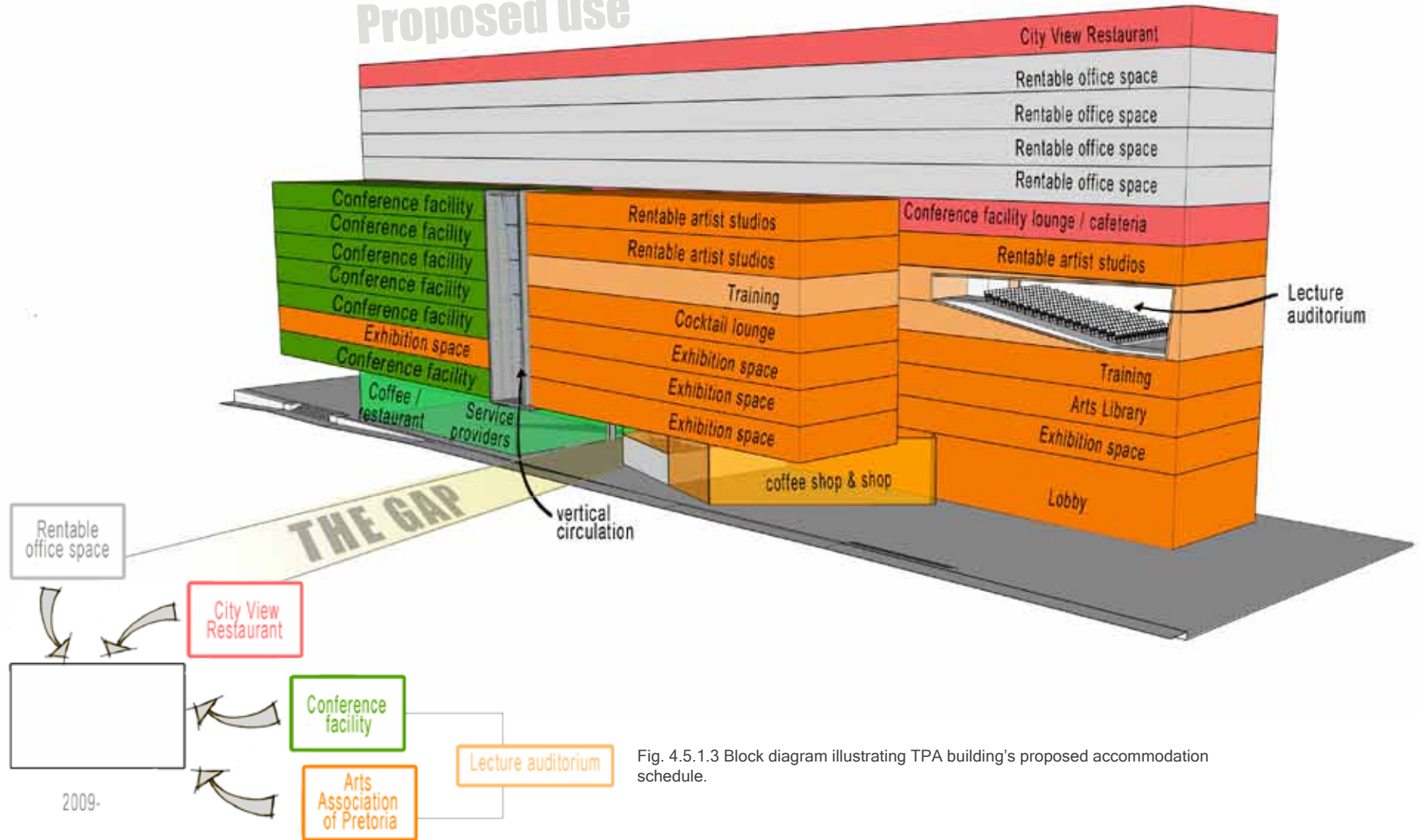


Fig. 4.5.1.3 Block diagram illustrating TPA building's proposed accommodation schedule.

4.5.2 Design intervention

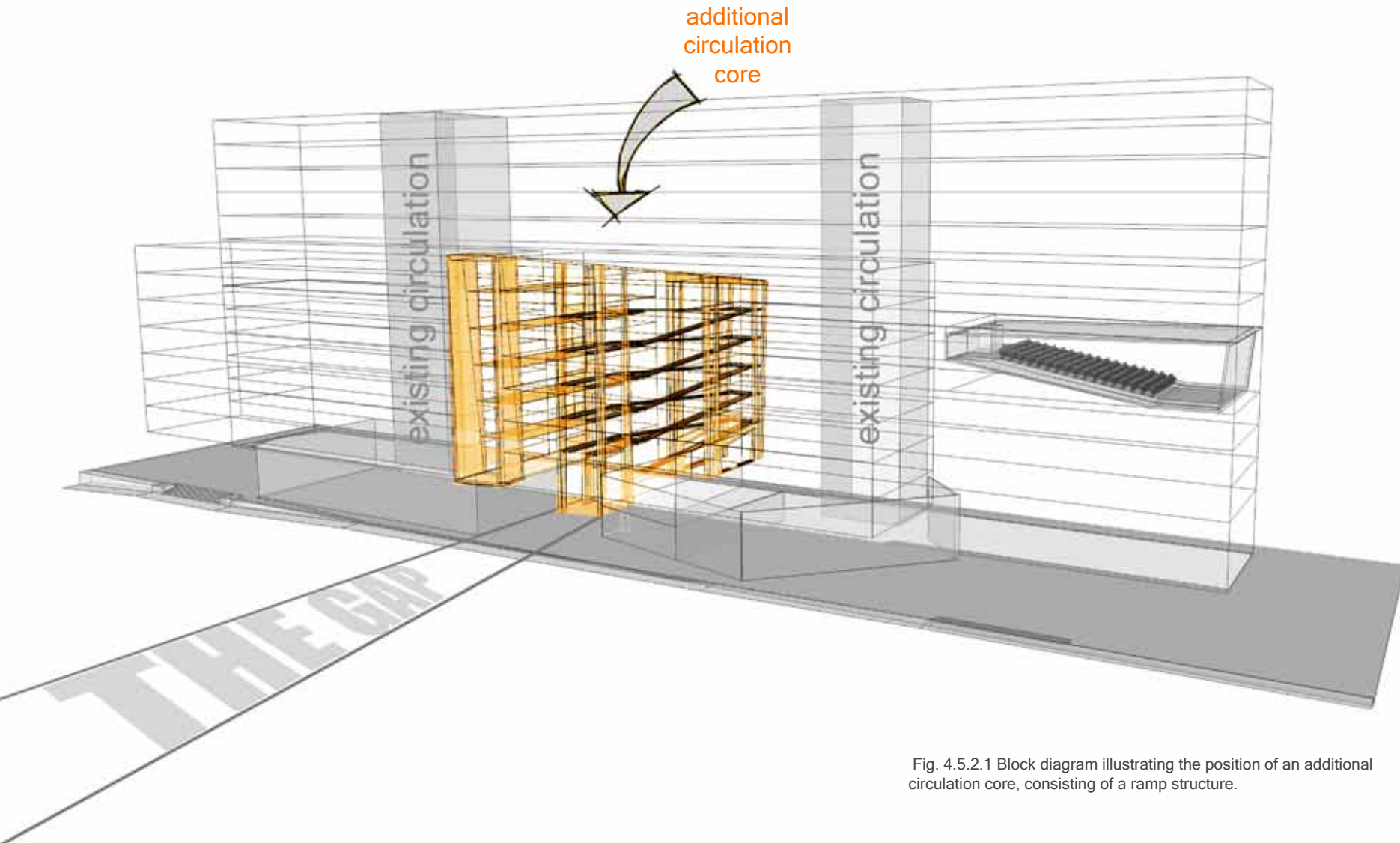


Fig. 4.5.2.1 Block diagram illustrating the position of an additional circulation core, consisting of a ramp structure.



Fig. 4.5.2.2 Image depicting the activated street edge along Pretorius Street.

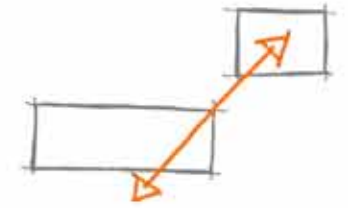


Fig. 4.5.2.3 Parti diagram depicting the central concept of the design,



Fig. 4.5.2.4 The concept introduces rectilinear lines slicing through the building



Activating Pretorius Street public interface_



Fig. 4.5.2.5 Activating Pretorius Street public interface.



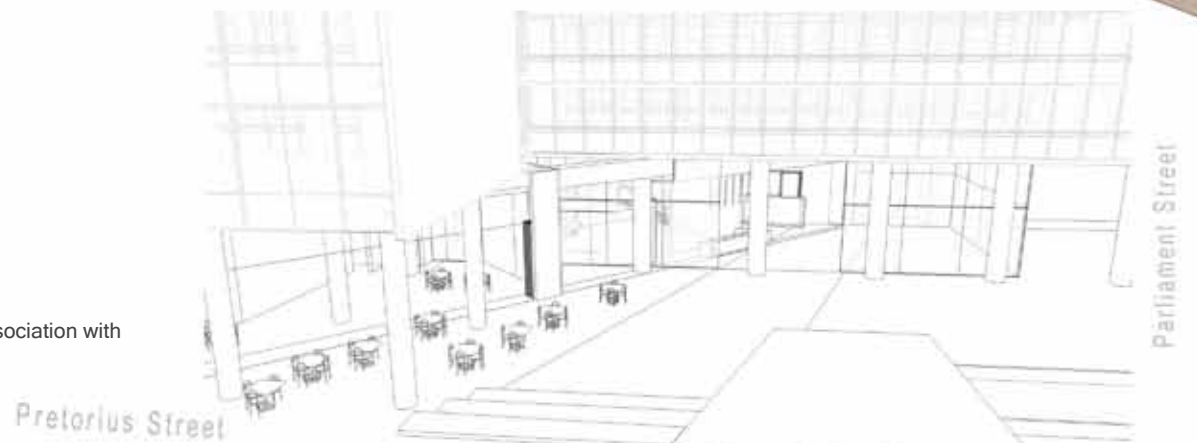
Fig. 4.5.2.6 Pretorius Street edge.



Fig. 4.5.2.7 Pretorius Street edge activated through the provision of public amenities and robust street furniture with signage boards incorporated.



Fig 4.5.2.8 Spacious double volume lobby area for the Pretoria Arts Association with reception desk and directional signage boards.



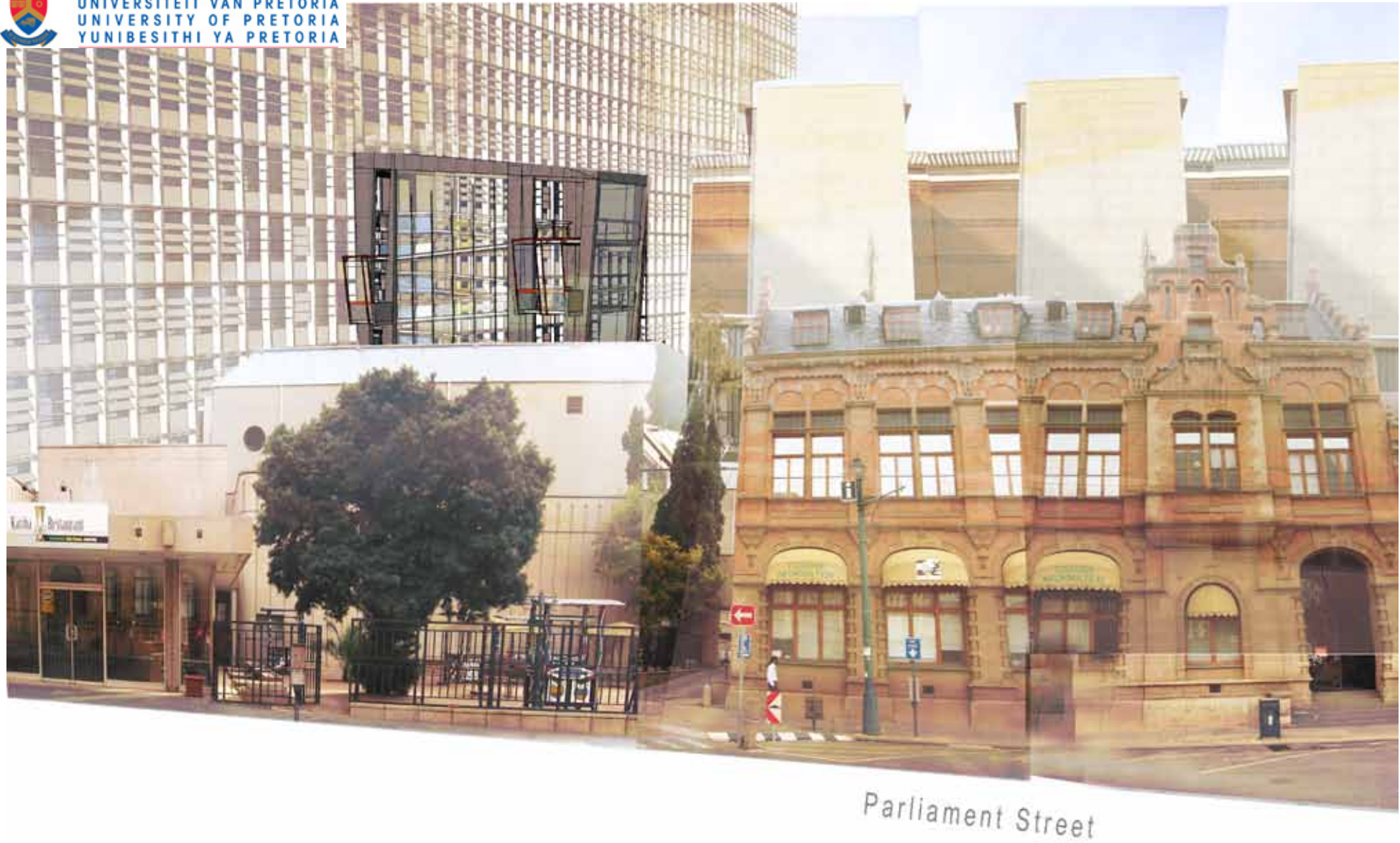


Fig 4.5.2.9 A section of the additional vertical circulation core protrudes out of the TPA building with a view of Church Square. Look out points are incorporated into the landing areas of the ramp.



Fig 4.5.2.10

INNENHOF WESTPARK

Architecture firm: Raderschall
Landschaftsarchitekten
Place: Zurich, Switzerland
Date: 2002

“The narrow dimensions of the inner courtyard of this office building determined the character of this project: a three-dimensional garden. A framework of flowers emphasizes the rectangular shape of the site, while a taut wire that stretches to the fourth floor of the building allows the garden to extend upward.”

Fig 4.5.2.10 Innenhof Westpark

Reference: Asensio, P. 2005. Ultimate Landscape Design. Spain: Anman Grafiques del Valles.

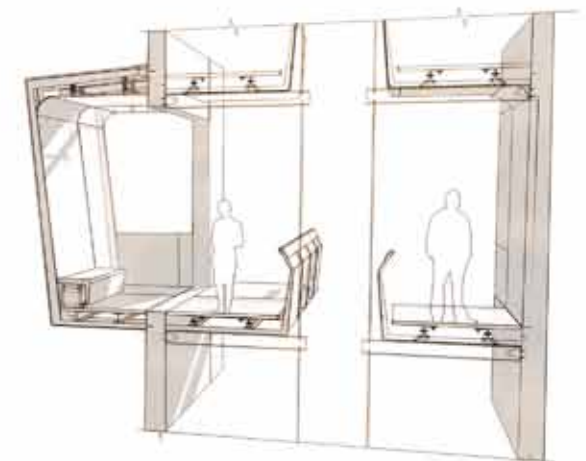
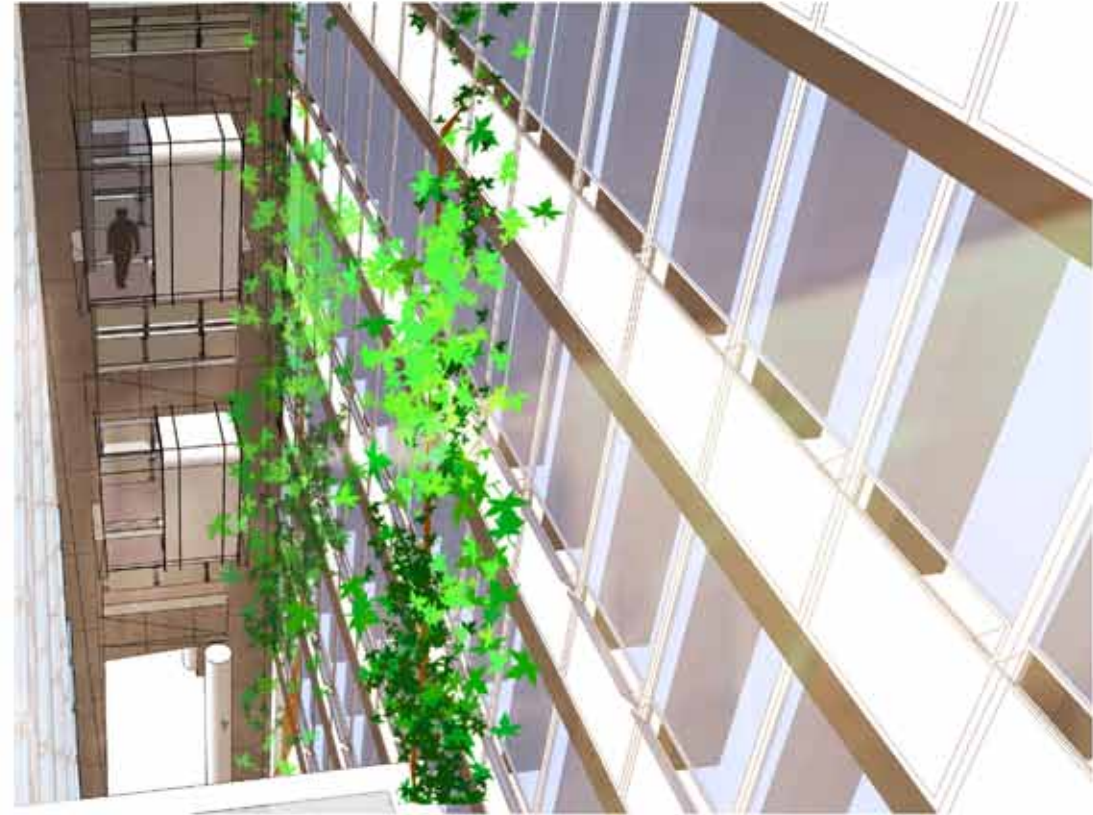


Fig 4.5.2.11 Pause hubs incorporated in the concrete structure of the vertical circulation core look out onto a vertical garden.

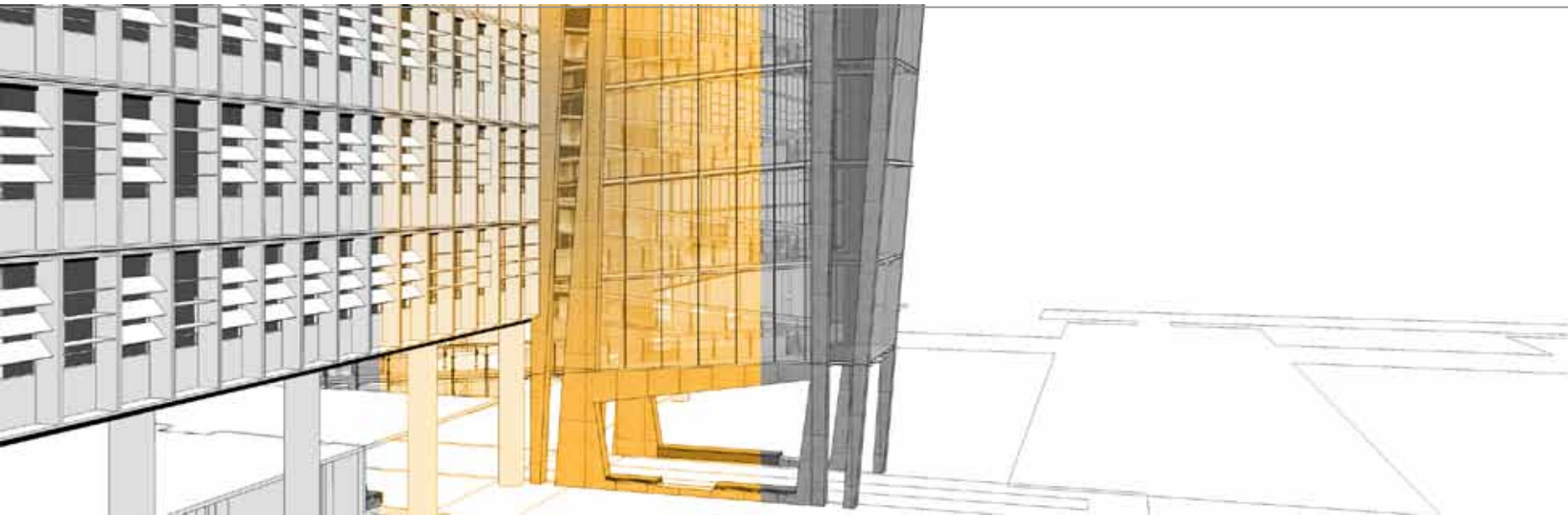


Fig 4.5.2.12 Look out points incorporated into the landing areas of the ramp over looks Church Square.



CHAPTER **5** Design and Technical Exploration

Chapter five illustrates an integrated approach towards design and construction.





[5] Design and Technical Exploration

5.1 Plans

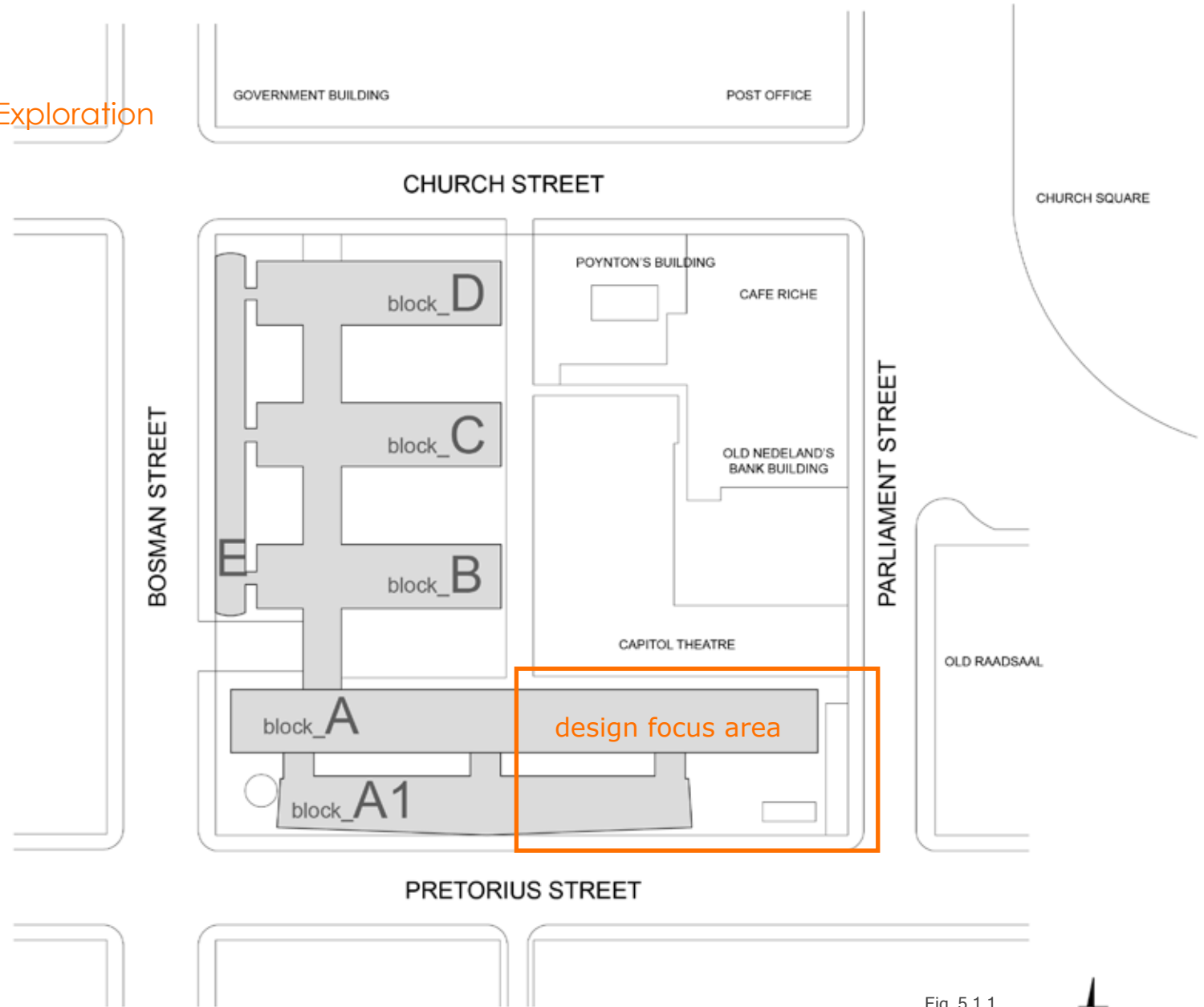
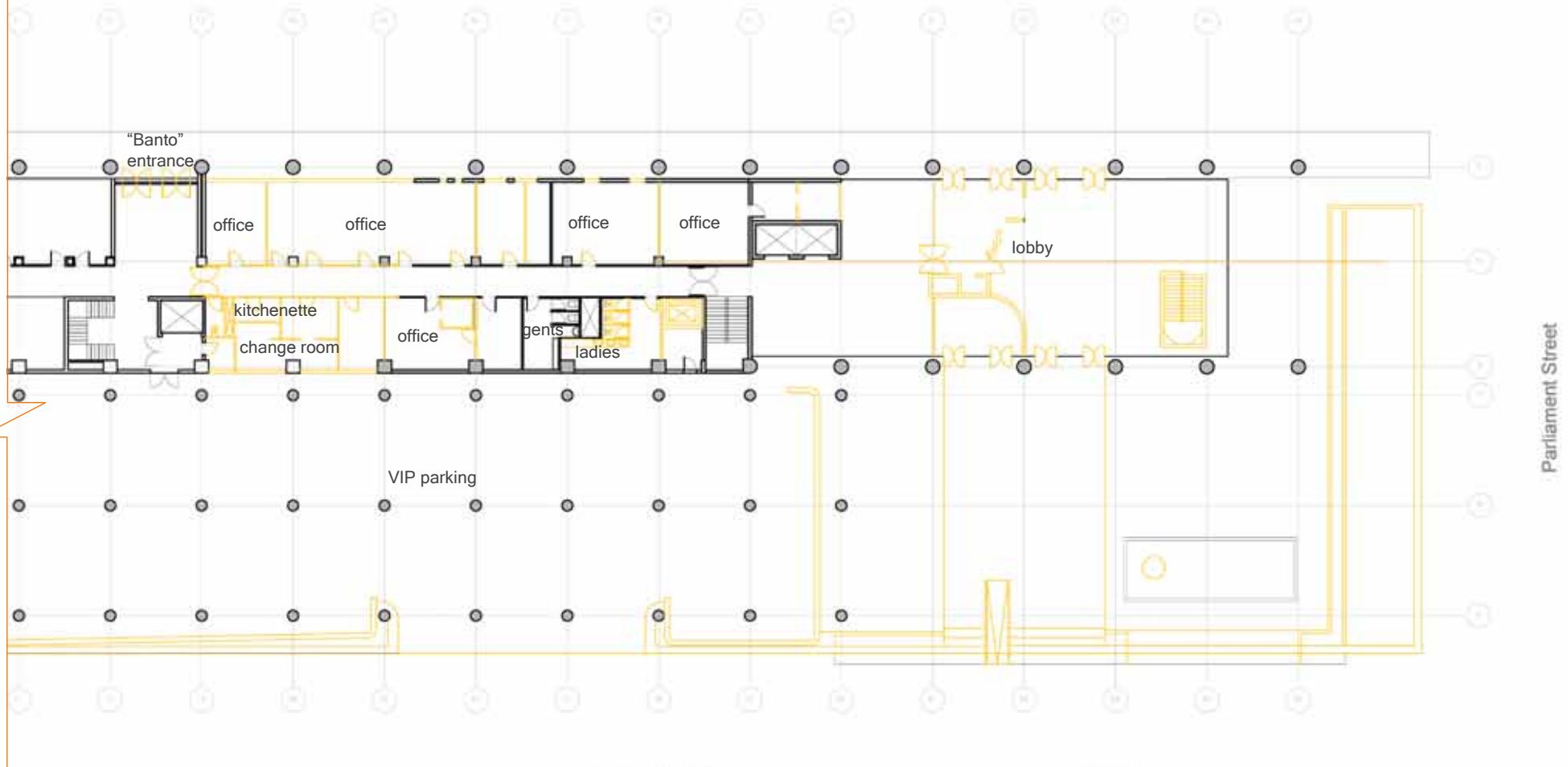


Fig. 5.1.1
LOCALITY PLAN



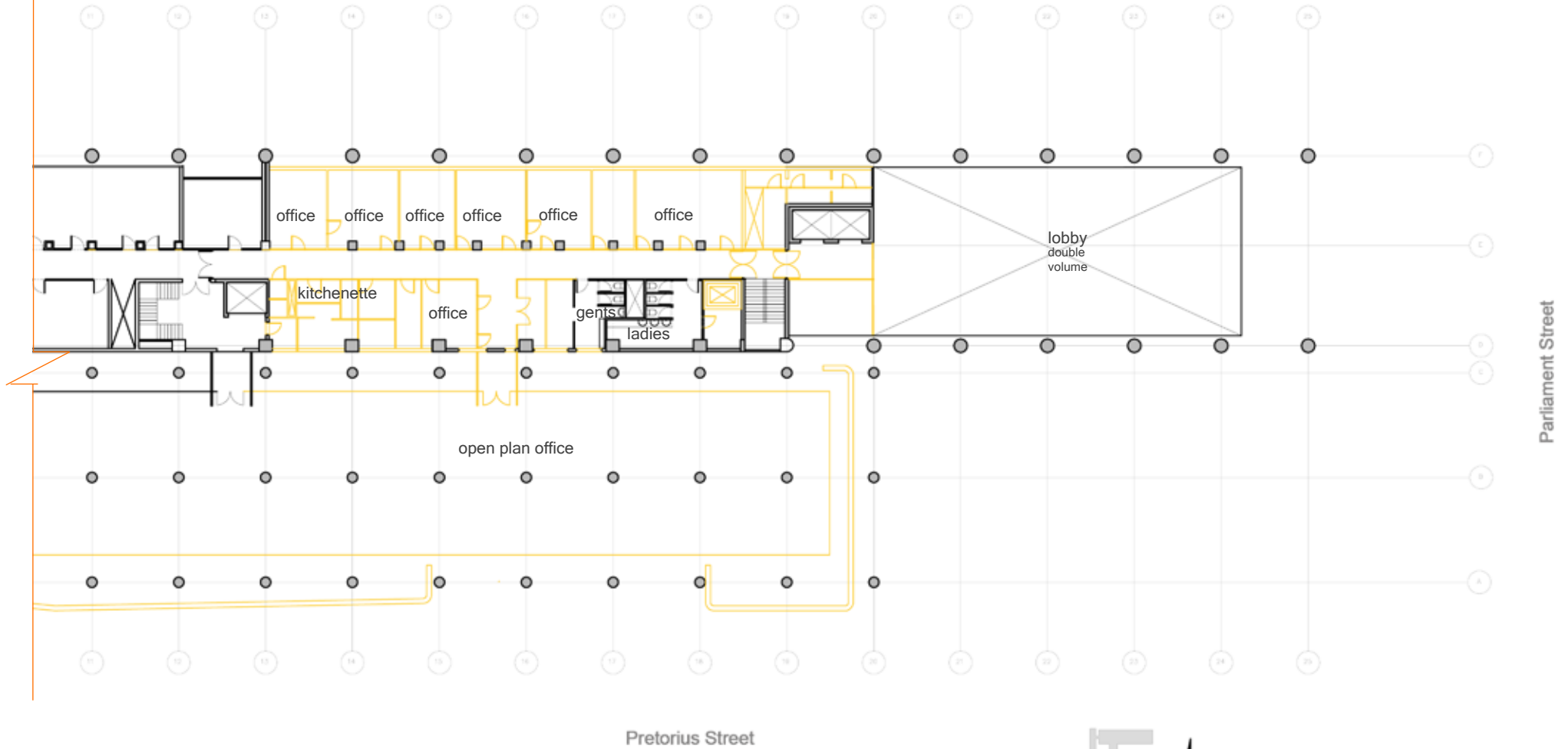
Pretorius Street

Parliament Street

- Original Walls
- Demolished Original Walls



Fig. 5.1.2
DEMOLITION PLAN:
GROUND FLOOR



- Original Walls
- Demolished Original Walls

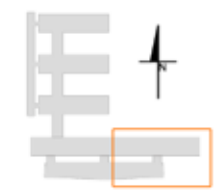


Fig. 5.1.3
DEMOLITION PLAN:
FIRST FLOOR

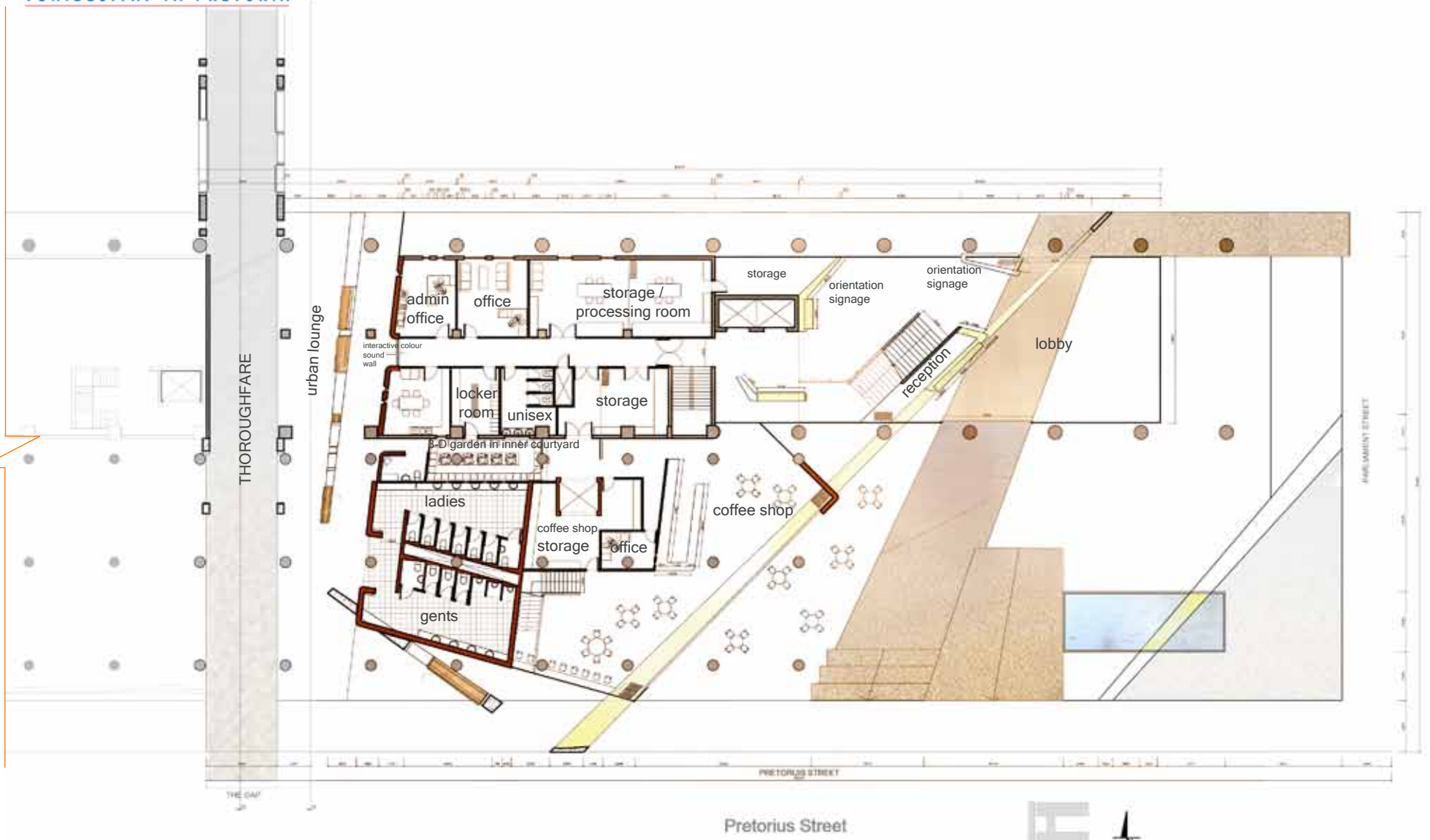


Fig. 5.1.4
 GROUND FLOOR PLAN

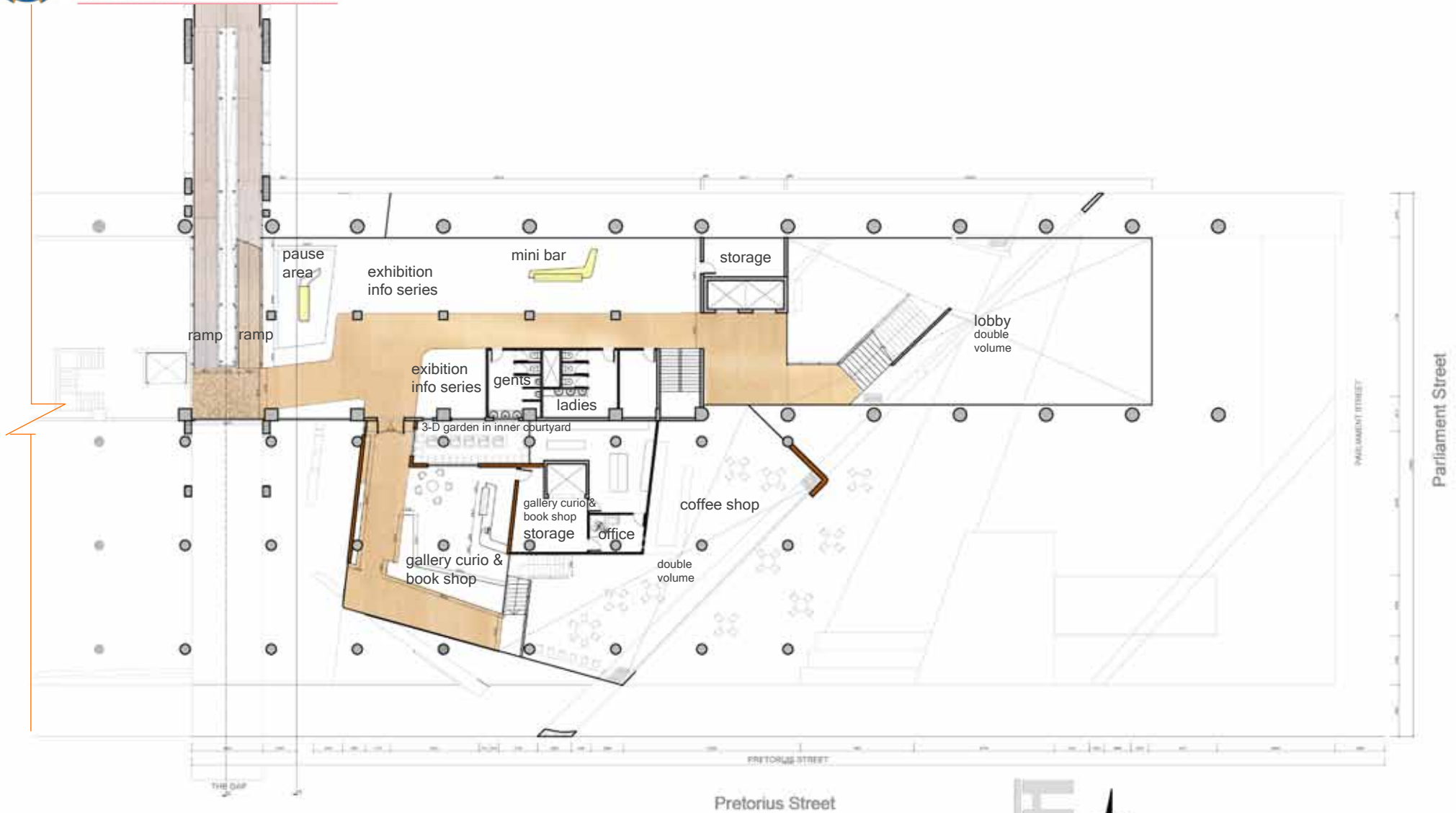


Fig. 5.1.5
 FIRST FLOOR PLAN

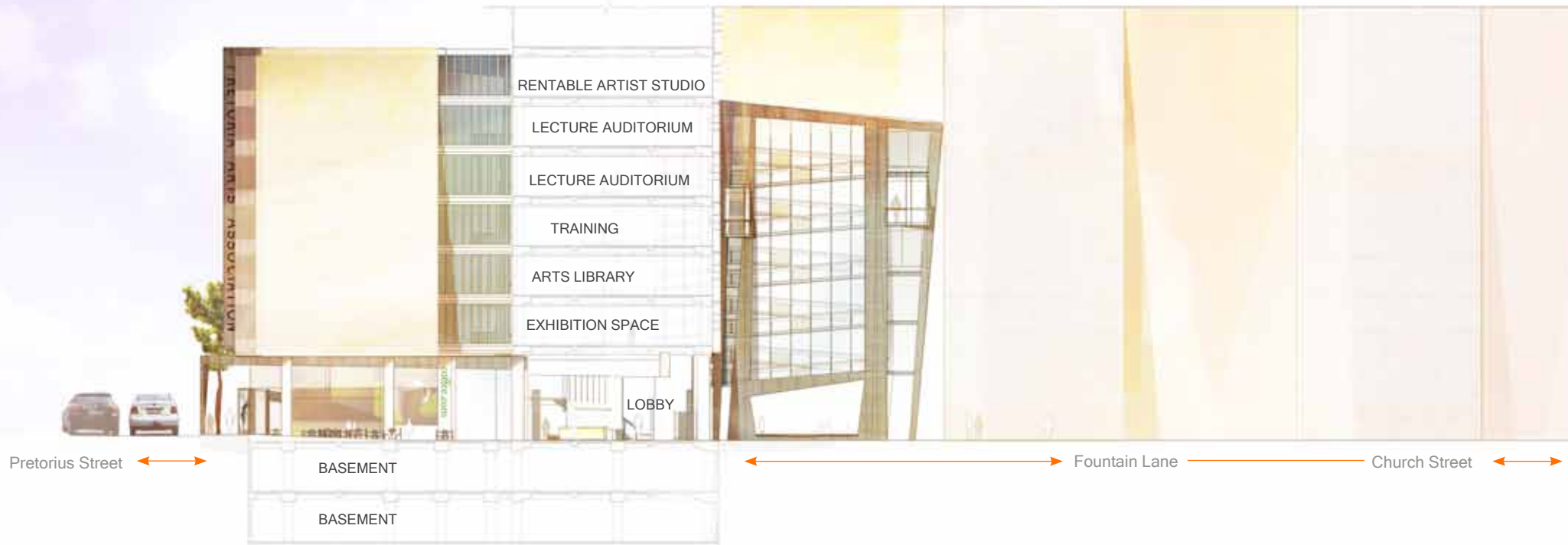
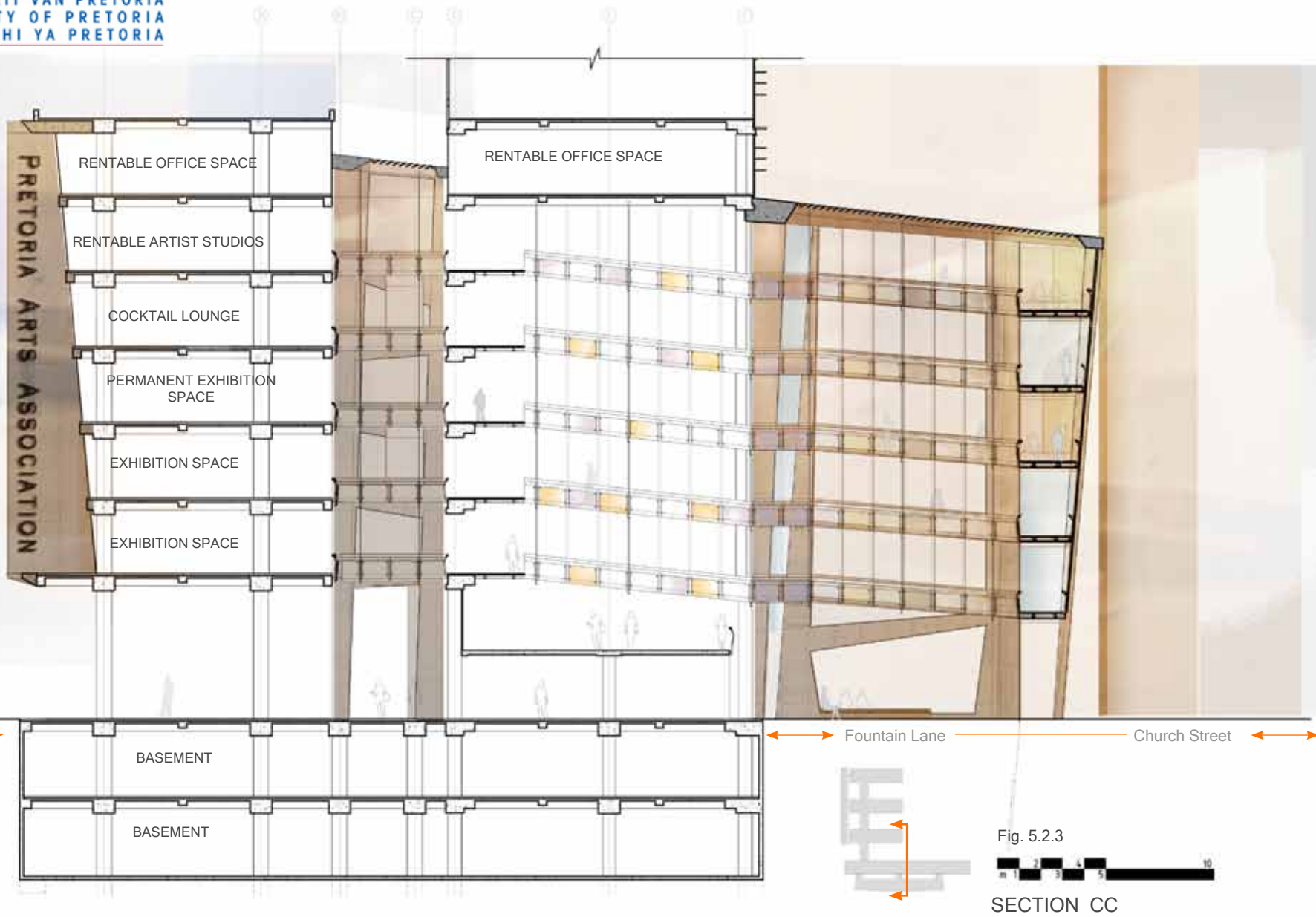


Fig. 5.2.1
SECTION AA



Fig. 5. 2.2

SECTION BB



5.3 Urban texture_ material strategy

Texture helps us to recognise and identify certain places. Mathews (2003, p.11) states; “Our existence plays off in towns and cities, and the urban grain helps us to make this world our own”. In accordance with the dissertation’s main themes, materials were selected according to their ability to be functional and, at the same time, to enhance sensory associations.

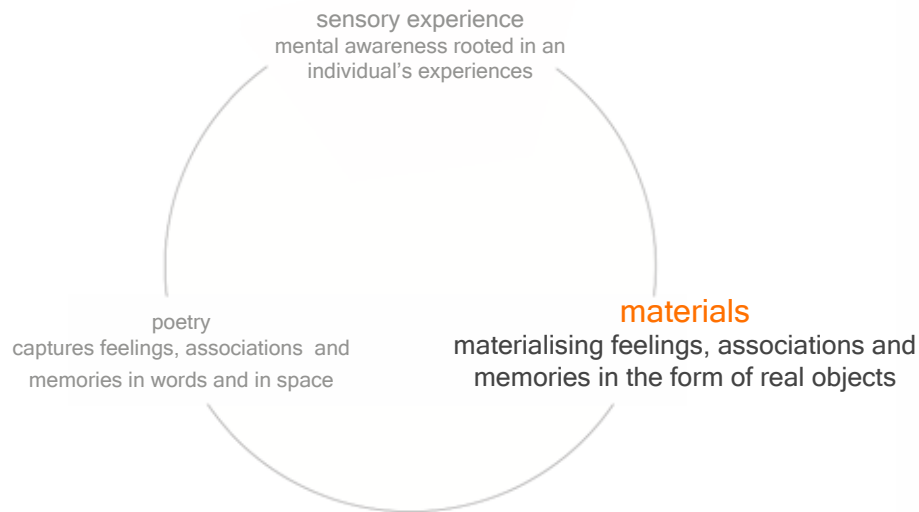


Fig.5.3.1 The three key dissertation themes.

Concrete_ is a cold, hard, liquid stone. It has the ability to transcend the purely visual realm to form mouldable tactile surfaces that intersect, define and respond to the city environment.

Wood_ is a natural, warm material with a spectrum of textures and musky odours. It can be both smooth and grainy.

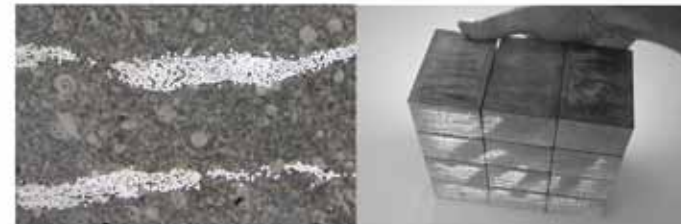
Polymers_ are synthetic materials with the capacity to be moulded into complex shapes. The materials’ colour can range from being transparent to translucent to opaque.



Concrete casted with texture.



Fly-ash reinforced concrete with crushed concrete aggregate



LiTraCon (light transmitting concrete)



Granite cobblestones and concrete strips with decorative embedded steel utensils.

Fig. 5.3.2 Material and sense palette.



Laminated pine wood



Engineered bamboo flooring



Plexiglas Satinice



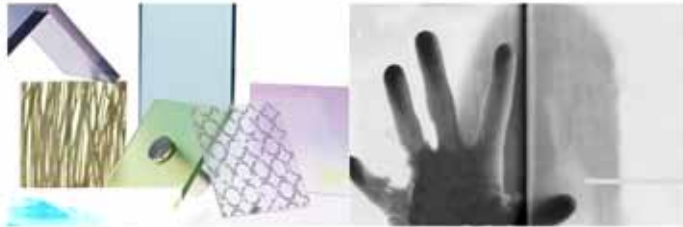
Plexiglas Satinice (colour)

Fig. 5.3.3 Material and sense palette.

sensibility
imagination
sound space
sensory circulation
hapticity sensation of touch
sensory experience
sense of rhythm
soft spaces
tangible
heat
smell
sound
sensuous
sensibility
ecoSENSE



Fig.5.3.4 Illustration of the tactile sense.



3Form
(Cast Polymethyl Methacrylate
[PMMA] resin.)



Surinno Solid Surfacing



Polished screed floor



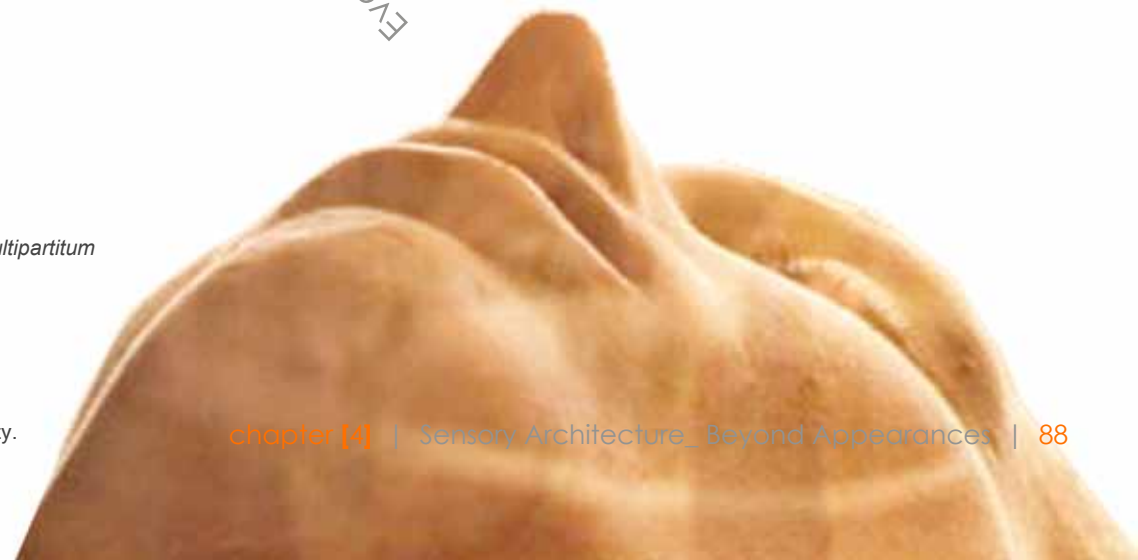
Jasmine
Jasminum multipartitum

Fig. 5.3.5 Material and sense palette.

Fig. 5.3.6 Image illustrating the way smell is perceived in a city.



Every city has its spectrum of tastes and odors. (Pallasmaa 2005, p. 55)



5.4 Details

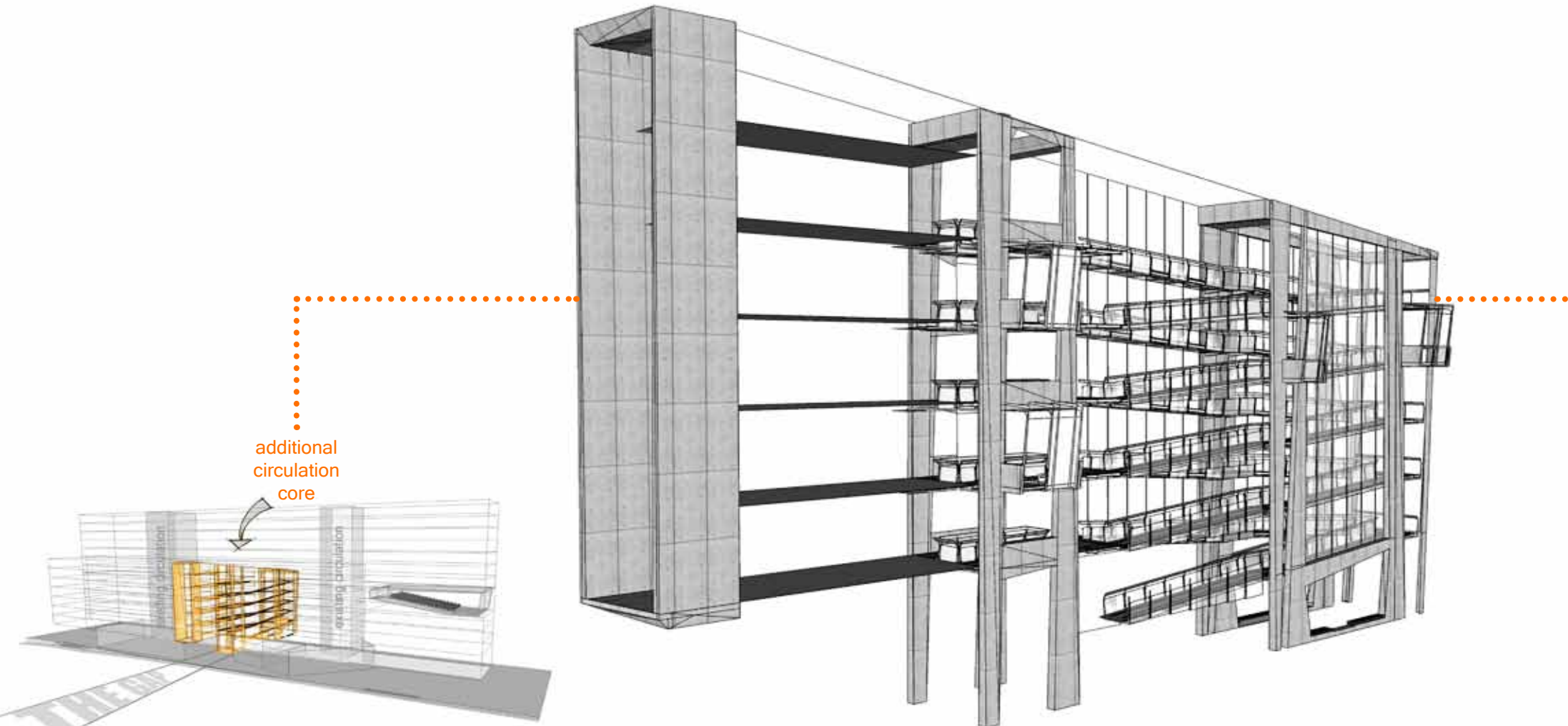
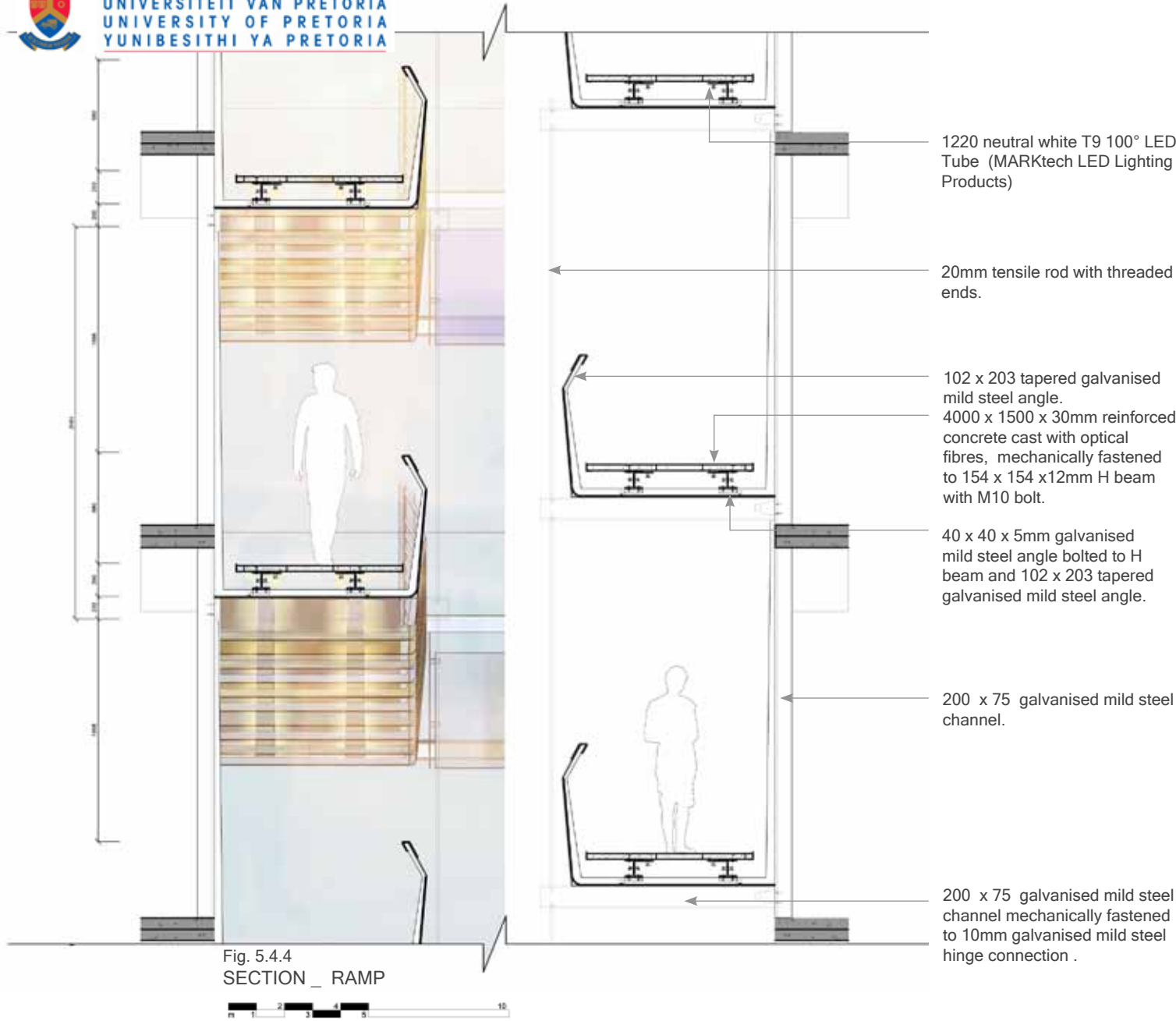


Fig. 5.4.1 Additional vertical circulation core introduced within the TPA building.

Fig. 5.4.2 Additional vertical circulation core structure.



Fig. 5.4.3 Axonometric diagram of the additional vertical circulation core.



Suspended walkway technical precedents_



O. R. TAMBO INTERNATIONAL AIRPORT, Johannesburg.



DEPARTMENT OF FOREIGN AFFAIRS, Pretoria.

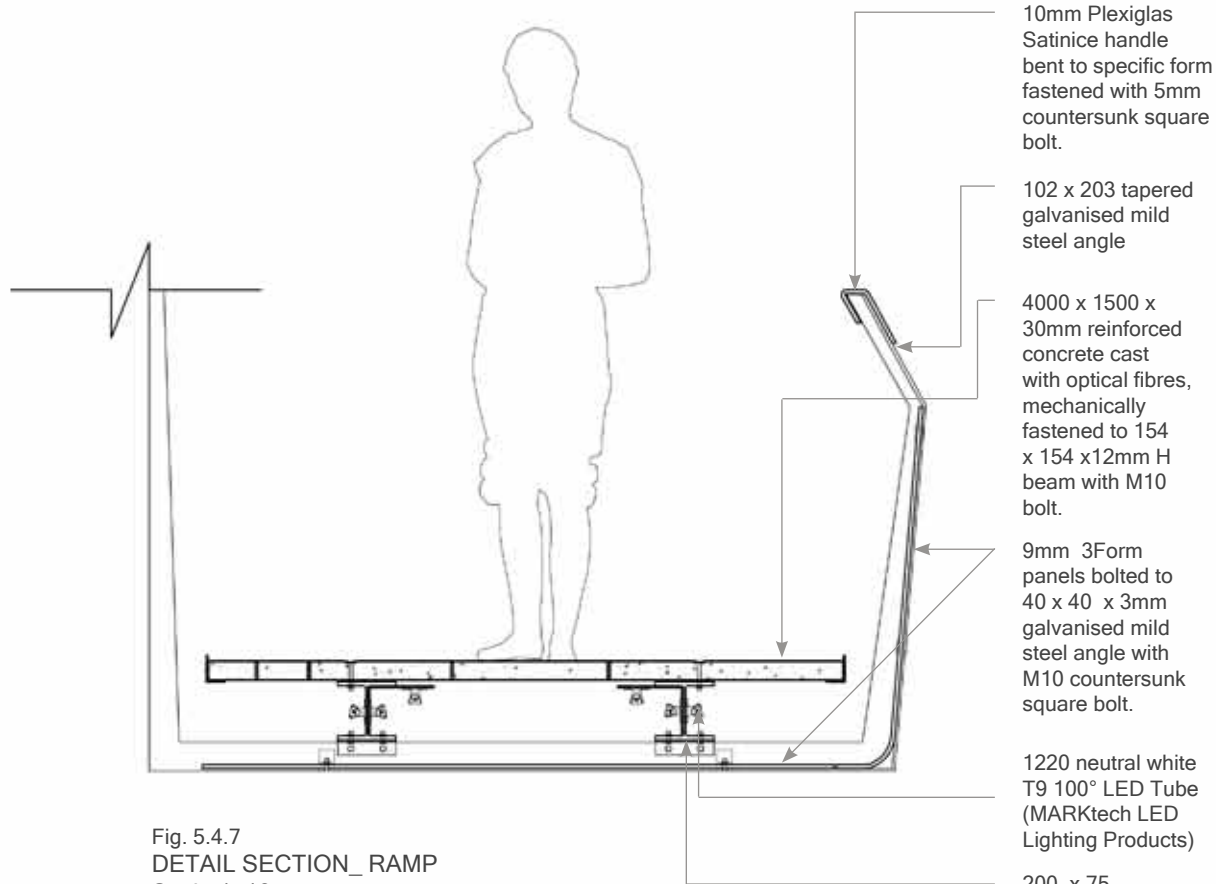


Fig. 5.4.7
DETAIL SECTION_ RAMP
Scale 1 :10

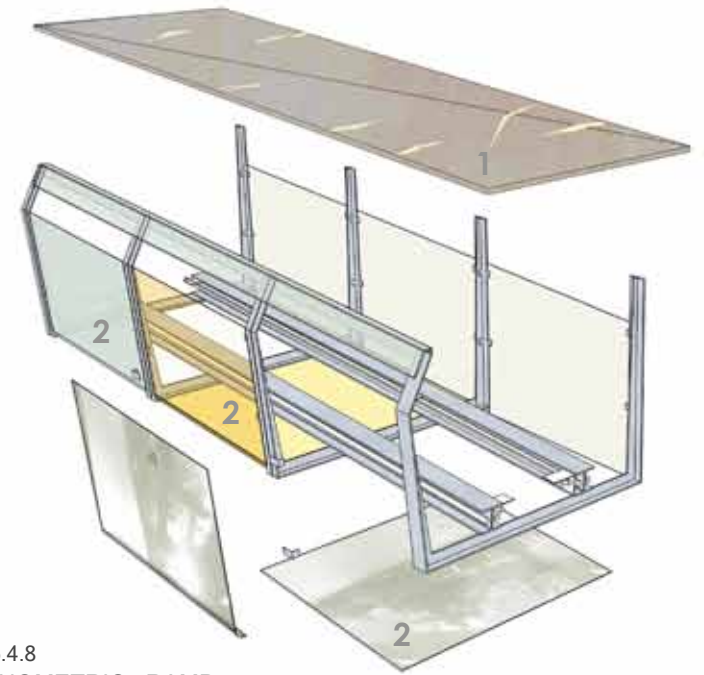


Fig. 5.4.8
AXONOMETRIC_ RAMP



LiTraCon



3Form (Cast Polymethyl Methacrylate [PMMA] resin.)

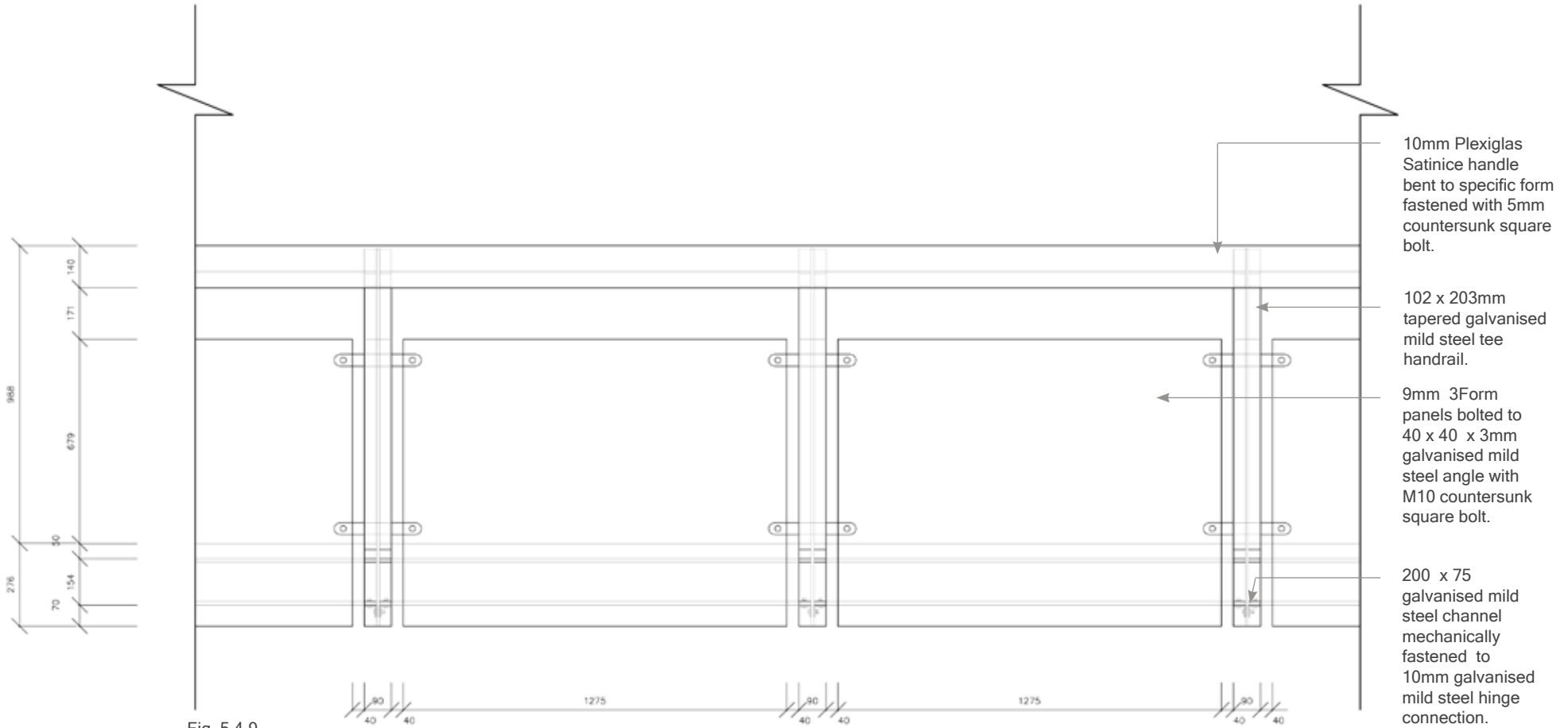


Fig. 5.4.9
 ELEVATION_LANDING
 Scale 1 :10

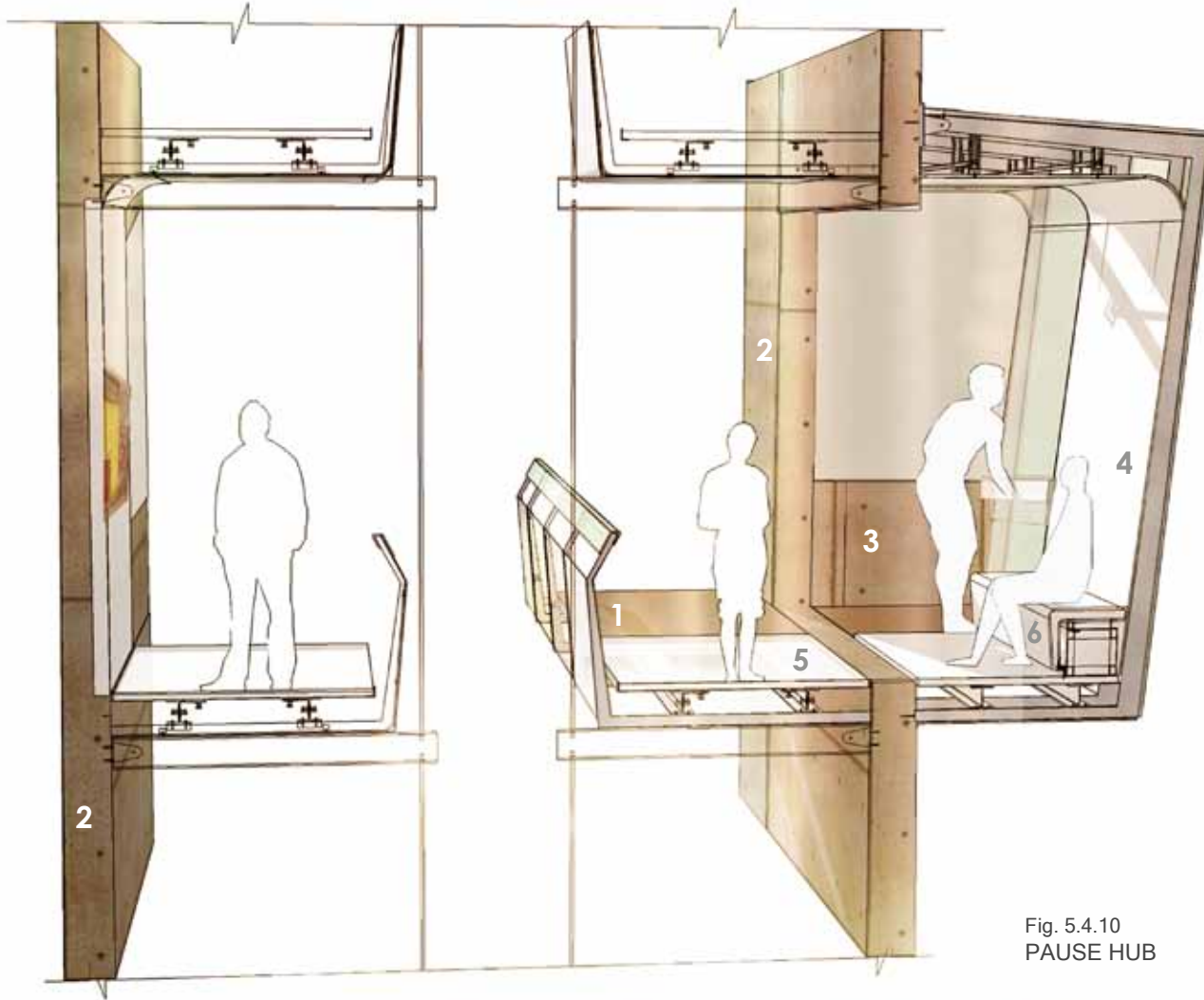


Fig. 5.4.10
 PAUSE HUB



LiTraCon



Reinforced
 concrete



Textured concrete



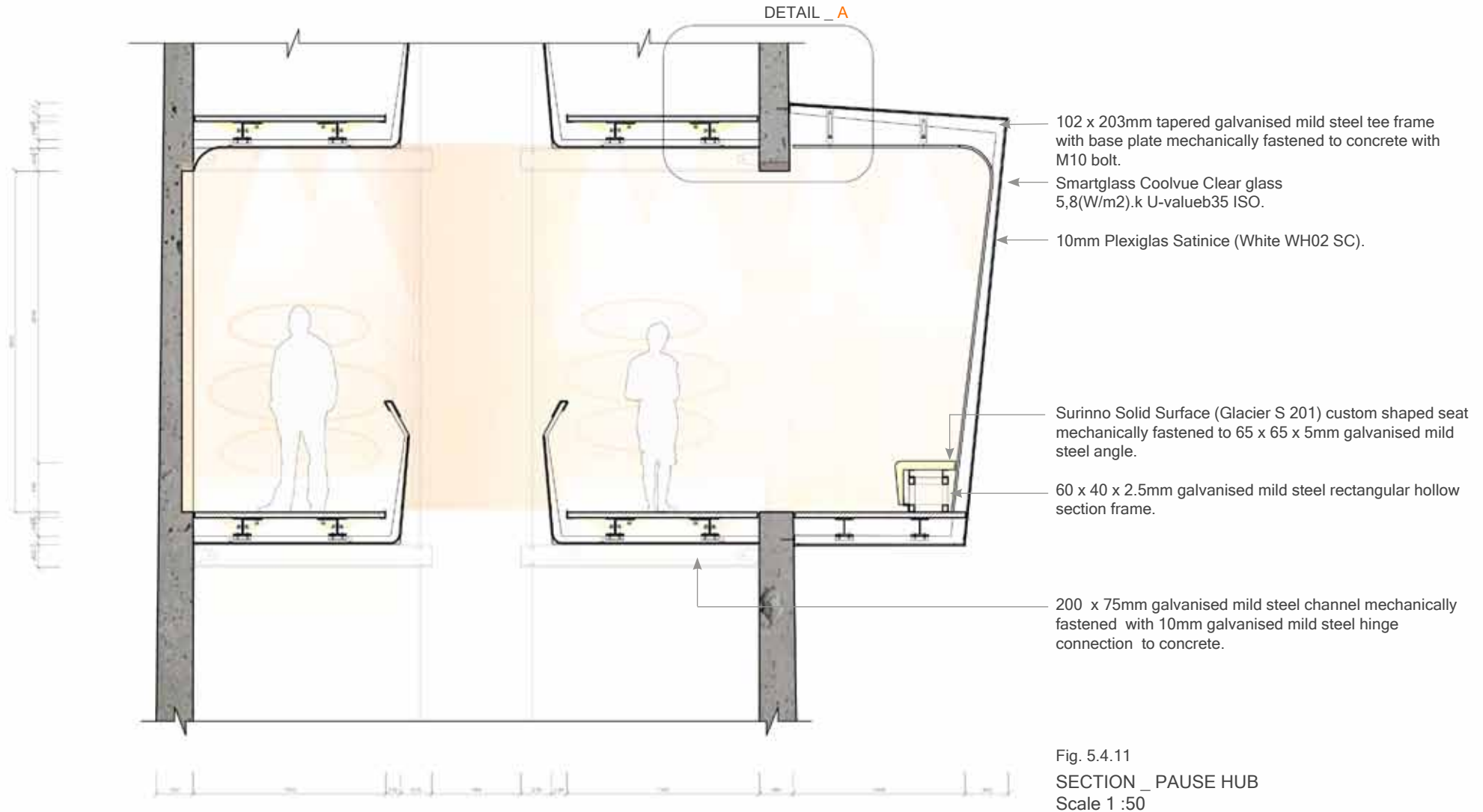
Plexiglas Satinice



Smartglass
 [frosted]



Surinno Solid
 Surfacing



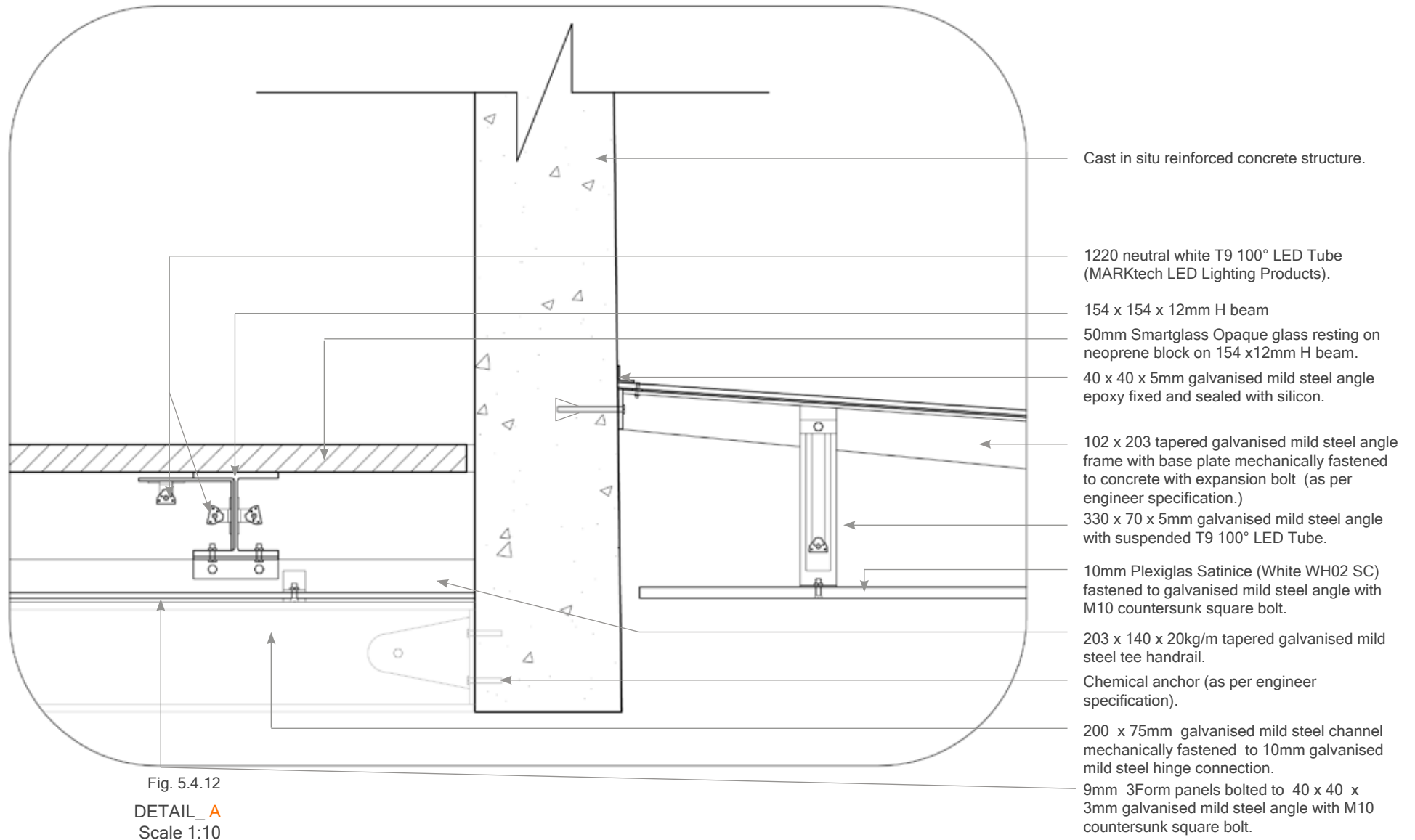


Fig. 5.4.12
DETAIL_A
Scale 1:10



Fig. 5.4.13 Illustration of staircase.



1
Polished screed floor



2
Engineered bamboo flooring



3
LiTraCon



4
Surinno Solid Surfacing



5
Plexiglas Satinice



6
3Form (Cast Polymethyl Methacrylate [PMMA] resin.)



Fig. 5.4.14
NORTHERN ELEVATION_ STAIRCASE
Scale 1 :50

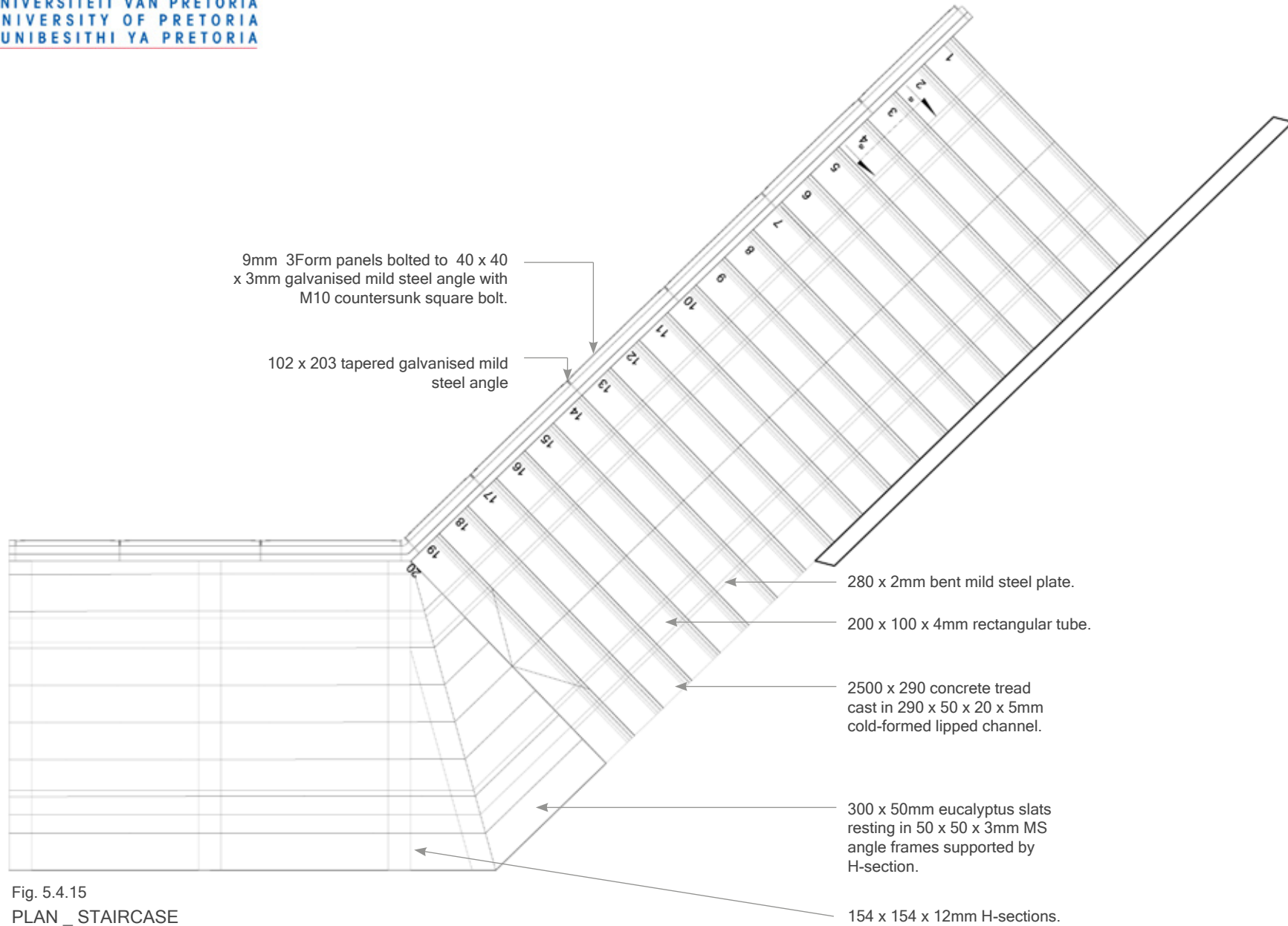


Fig. 5.4.15
PLAN_ STAIRCASE
Scale 1 :50

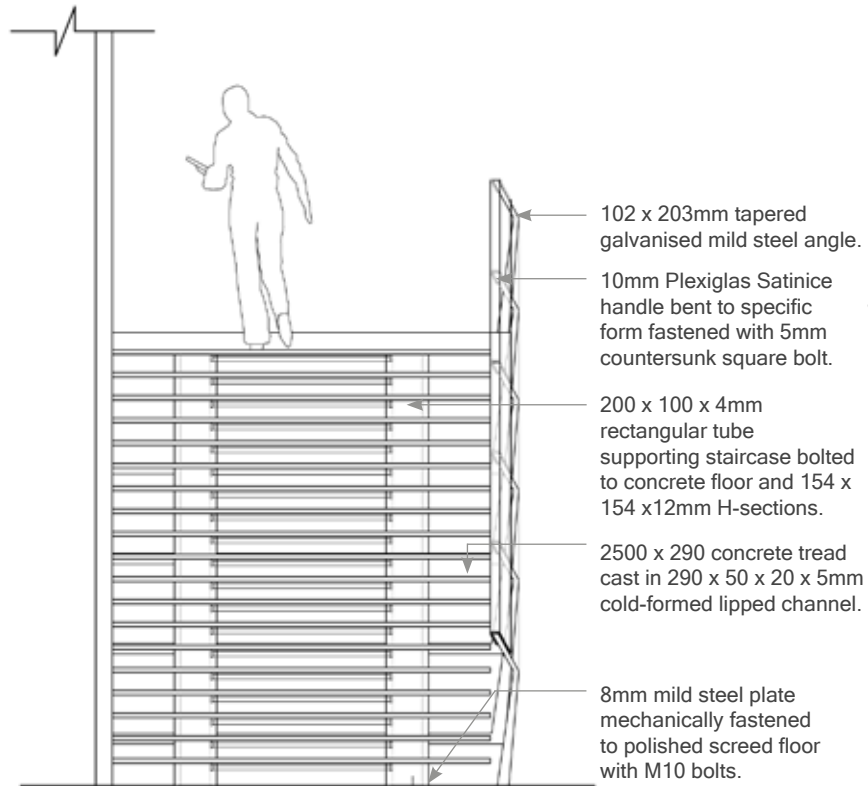


Fig. 5.4.16
EASTERN ELEVATION_ STAIRCASE
Scale 1 :50

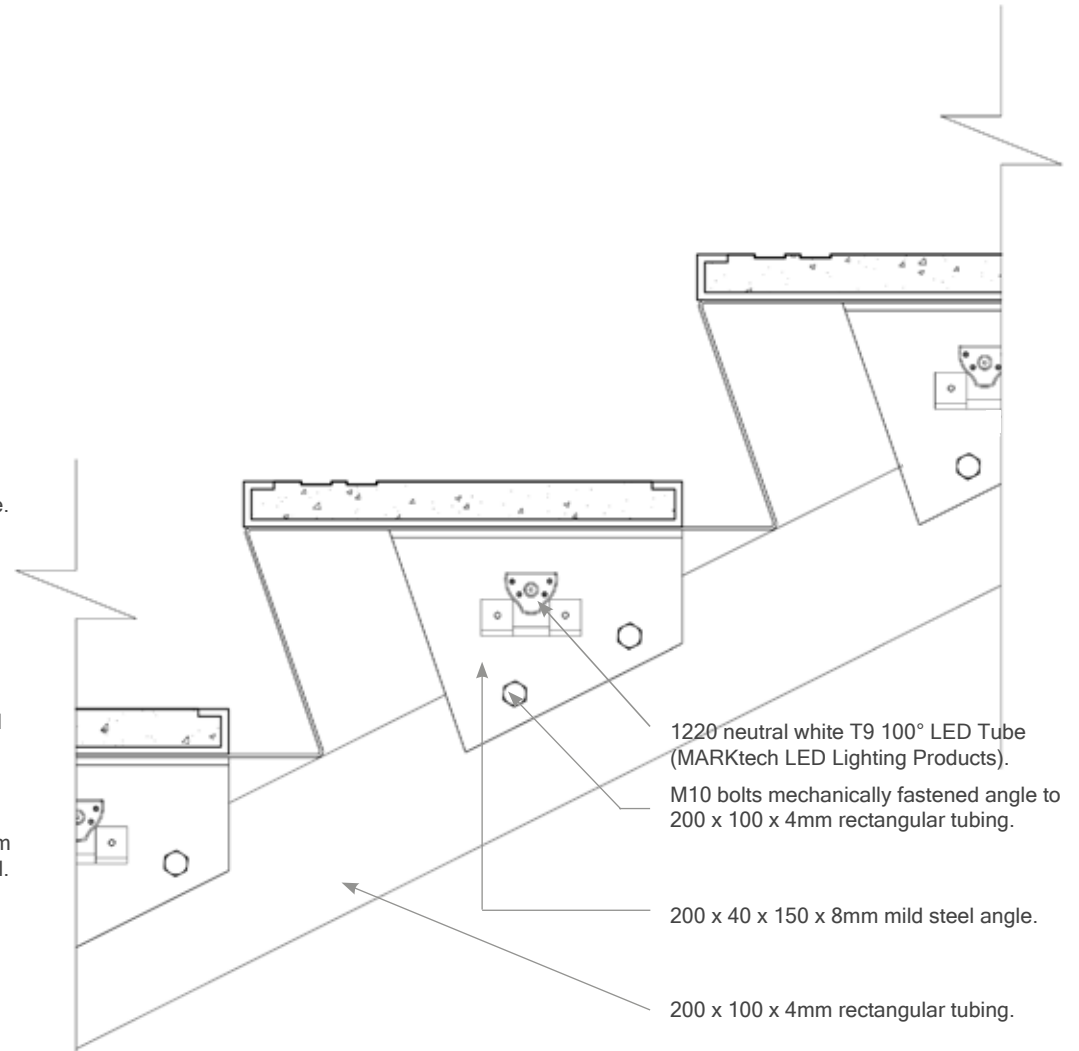


Fig. 5.4.17
DETAIL_ section a.a
Scale 1 :5



Fig. 5.4.18 Illustration of public toilets signage wall with incorporated street furniture.



1
Reinforced concrete



2
Textured concrete



3
Granite cobblestones and concrete strips with decorative embedded steel utensils.



4
Laminated wood

Signage precedent_



Fig. 5.4.19

BILLRING SHOPPING CENTRE'S PUBLIC TOILETS, Birmingham.

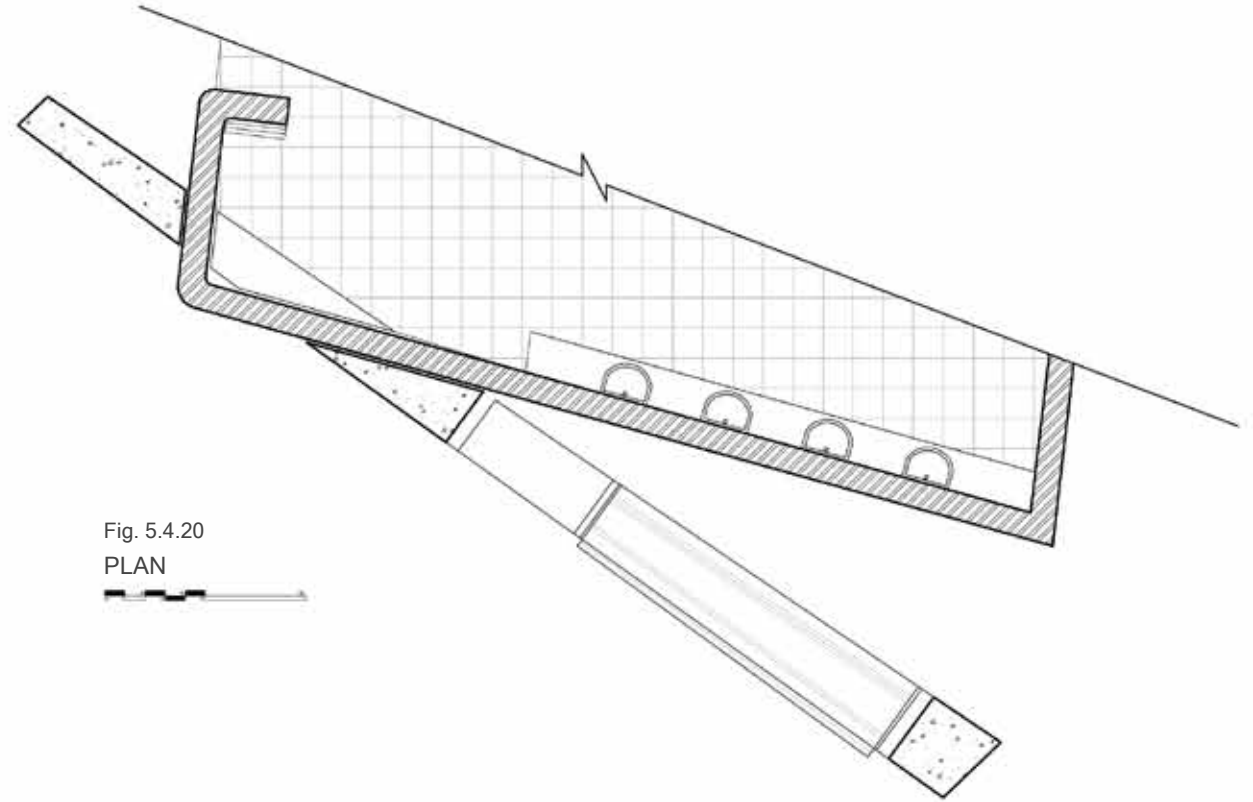


Fig. 5.4.20
PLAN

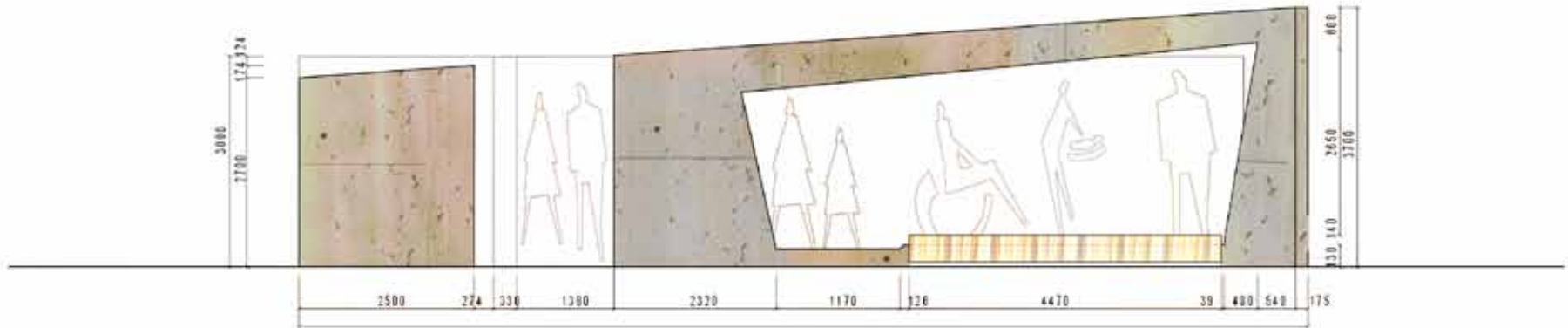


Fig. 5.4.21 ELEVATION



Fig. 5.4.22 Urban lounge street furniture.



Reinforced
concrete



Textured concrete



Laminated wood

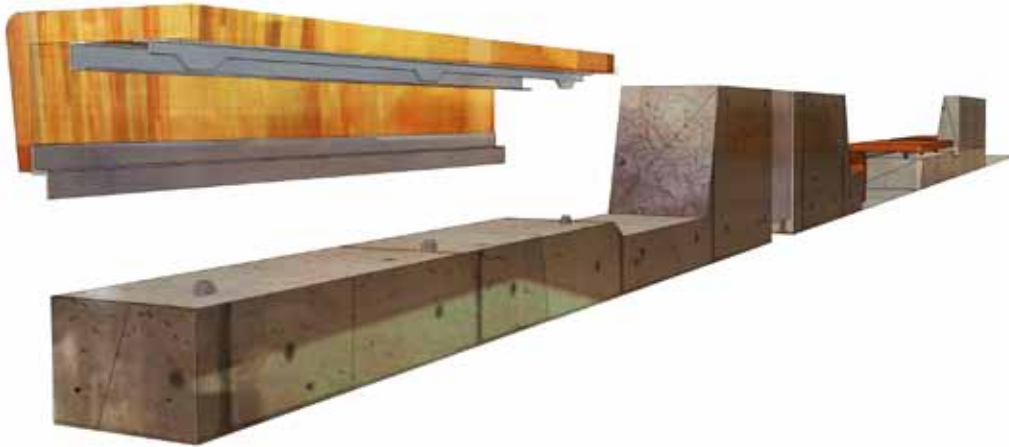


Fig. 5.4.23 Urban lounge street furniture components.

65 x 50 x 5mm galvanised mild steel angle fastened to laminated wood with 4.8 mm countersunk self tapping screw.

Custom made laminated wood seat.

65 x 50 x 5mm galvanised mild steel channel fastened to laminated wood with 4.8 mm countersunk self tapping screw.

In situ cast concrete block.

65 x 50 x 5mm galvanised mild steel angle fastened to laminated wood with 4.8 mm countersunk self tapping screw, welded to a similar angle mechanically fastened to concrete with M10 bolt.



Fig. 5.4.24

..... J-bolt cast in concrete.

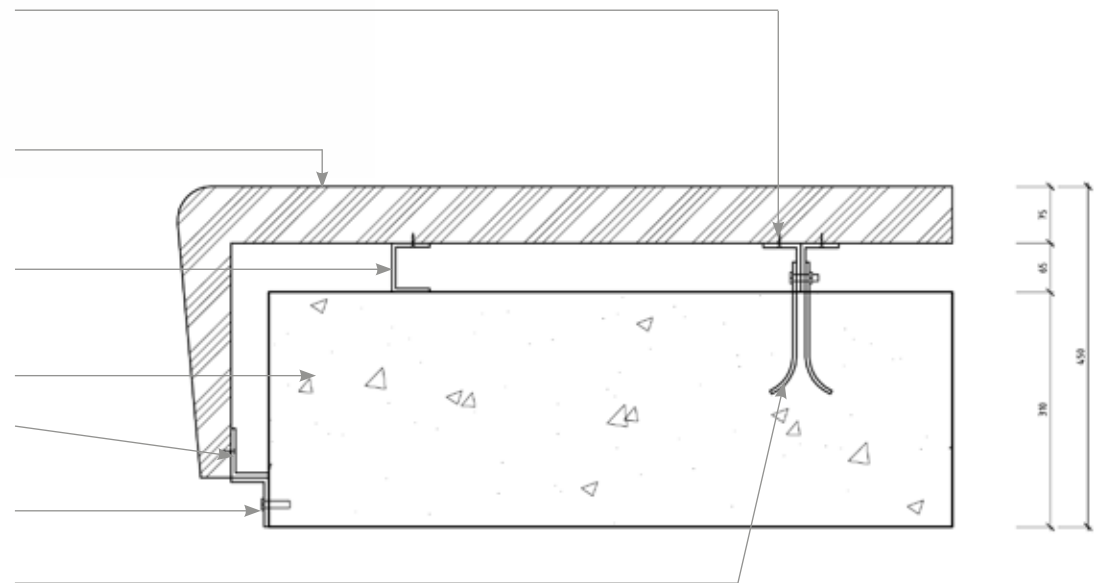
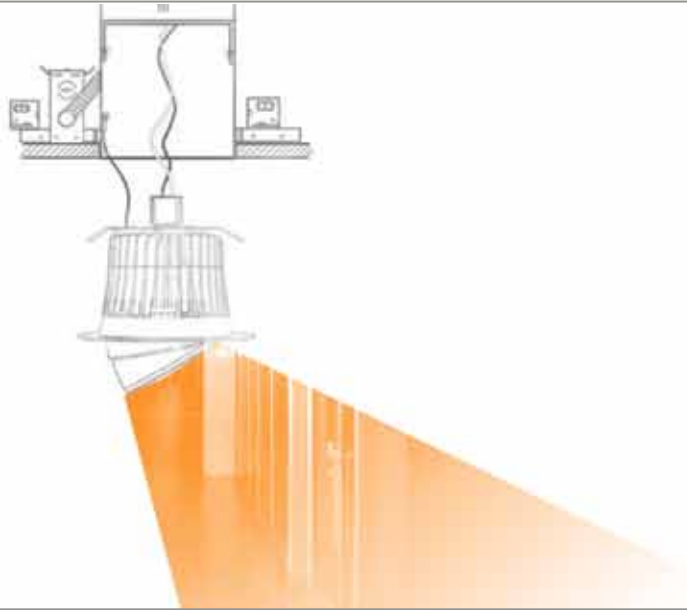


Fig. 5.4.25 SEAT DETAIL
Scale 1 :10



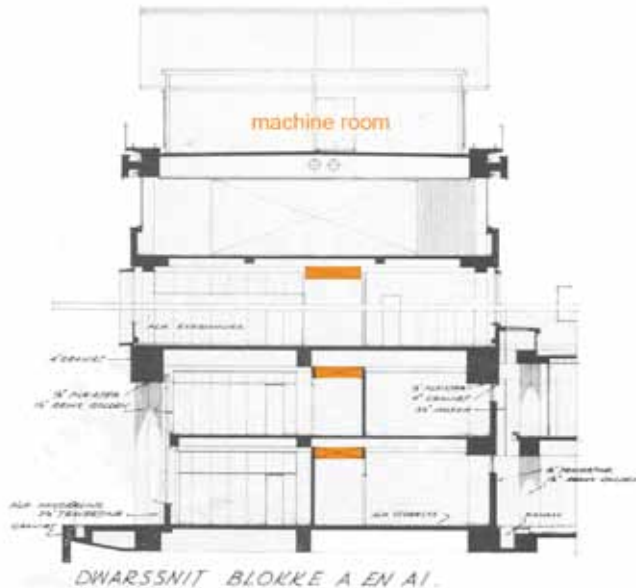
CHAPTER **6**
Additional Technical Information



6.1 Building climate and air conditioning

Existing services_

The whole of the TPA building are surfaced by an air-conditioning system, which regulates humidity, temperature and air filtration. Cold and warm air is circulated through air channels running above the corridors, illustrated



6.1.1 Original section drawing published in 1963 in the November edition of the S.A. Architectural Record with indicated air channels and placement of one of the machine rooms.

in Fig 6.1.1. The building has four machine rooms, two on the roof and two on intermediate floors.

Additional natural ventilation_

According to Holm, (1996, p.1) solar passive design is sensitive to the climate and uses resources from the natural environment such as the heat of the sun, wind and temperature differences to heat or cool the building. Through the design intervention of an additional circulation core, solar passive design principles were introduced to add to the climatic comfort of the building.



6.1.2 Diagram illustrating the natural ventilation process in the additional circulation core.

6.2 Lighting

Existing light quality_

The daylight light quality in the TPA building is of a high quality due to the amount of south facing windows and louvered north facing windows. Light fixtures as discussed in the building analysis section, 3.3.2.7 Ceilings, provide the building with artificial light.

Additional lighting_

Two additional LED lighting systems were introduced within the design.

* The LED PAR38 Lamp, especially designed for museums and art galleries is proposed to be utilized in the exhibition spaces of the Pretoria Arts Association. (Fig. 6.2.1)

* The T9 100° LED Light Tube is used throughout the Design due to its reduced maintenance costs and energy saving ability. (Fig. 6.2.2)



Fig. 6.2.1 LED PAR38 Lamp.



Fig. 6.2.2 T9 100° LED Light Tube.

6.3 SBAT Rating

The Sustainability Building Assessment Tool (SBAT) developed by Jeremy Gibberd from the CSIR, was implemented to rate the sustainability of the design intervention.

Several of the criteria in the SBAT are not relevant to an interior thesis project. Due to this fact certain assumptions were made.

Three marks out of five were awarded to the buildings social, economic and environmental performance. The adjacent graph illustrates the performance of this project.



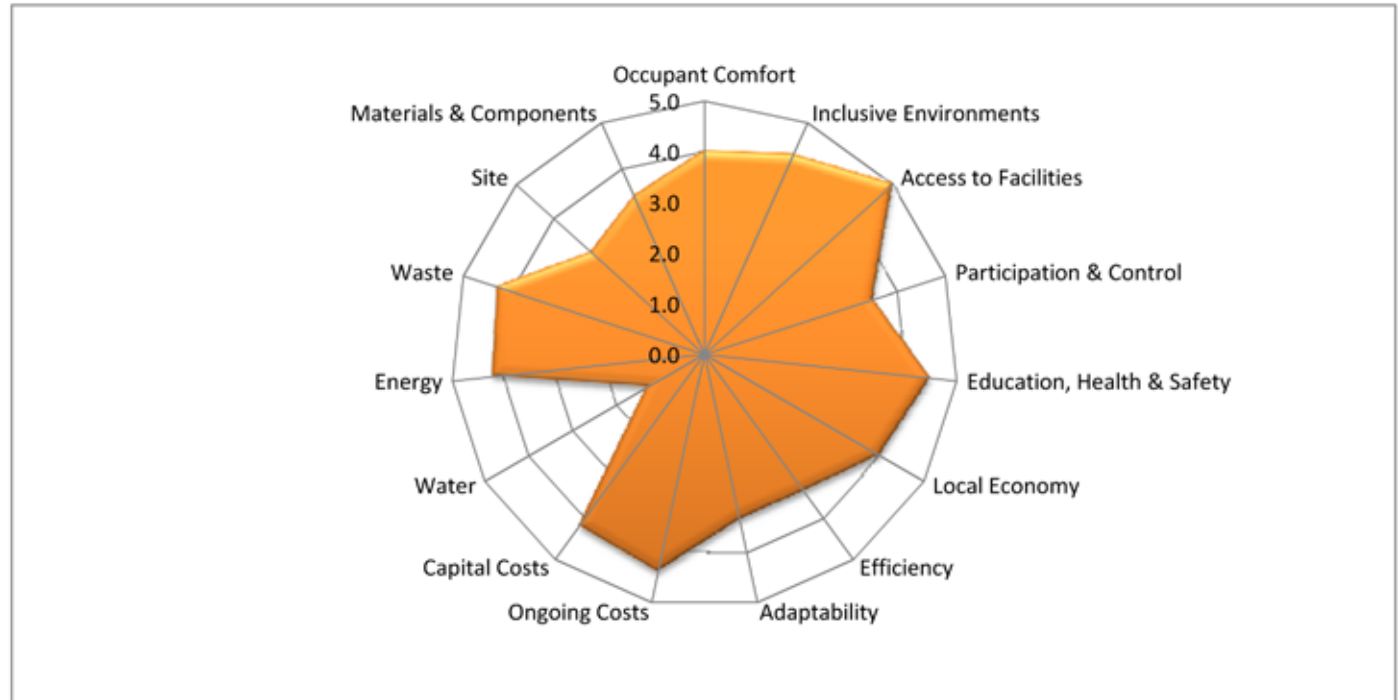
SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT- P) V1

PROJECT

Project title: Re-activating the TPA Building
Location: Pretoria CBD

ASSESSMENT

Date: 26-Oct-09
Undertaken by: Carien Theart
Company / organisation: UP
Telephone: Fax:
Email:



Social 4.3

Economic 3.9

Environmental 3.2

Overall 3.8

Classification

Fig. 6.3.1 SBAT assessment.



Conclusion_

Our experience of being in this world is formulated by the amalgamation of the senses. To experience something means to be able to touch, see, taste, hear and smell it. Therefore, for architecture to truly engage us, it should be designed with the intangible sensuous dimension in mind. The sensory realm of architecture goes beyond appearances. What a place looks like becomes less significant, but how it feels is essential. In Maya Lin's (2000, p.103) words: "I see architecture not as a form that contains space, but as an experience - a passage".

Due to the subjective nature of sensory experiences, my approach to the design was not to literally stimulate the senses but for the design to subtly guide the visiting body to experience the space. Therefore it is not about the light source, but its interaction with the surface, not only about the visual texture of materials but their tactile qualities and ability to envelop and resonate sound.

This sensuous approach towards design has been introduced into the skin of the TPA building. The design thereby wakes the TPA Building from its dormant state within the Pretoria CBD; transforming it into a building which not only resides in public space, but by its very nature becomes a public space. As stated by Zumpthor (2006, p.12), this building will act as "an envelope and background for life which goes on in and around it, a sensitive container for the rhythm of footsteps on the floor, for the concentration of work, for the silence of sleep."



CHAPTER Acknowledgements



“So we fix our eyes not on what is seen, but on what is unseen. For what is seen is temporary, but what is unseen is eternal.” 2 Corinthians 4: 18

All glory to the author and perfecter of my faith.

Catherine and Nico, thank you for all your support, motivation and enthusiasm to teach and inspire me throughout all my years at Boukunde.

To my family and friends; thank you for all your encouragement, motivation, love and prayer.





Fig. 7.1
2009

Addendum A_visual exploration of poem.



Let your eyes touch
her tactile surface,
stroke the patina of
wear,
blink at her bright
new layers and





amidst those of numerous traders, shopkeeper, residents, work force and school children.





Addendum B_ poetry

A collection of poems capturing architectural elements.

San Paolo Fuori le Mura, Rome
Elizabeth Jennings

It is the stone makes stillness here. I think
There could not be so much of silence if
The columns were not set there rank on rank,
For silence needs a shape in which to sink
And stillness needs these shadows for its life.

My darkness throws so little space before
My body where it stands, and yet my mind
Needs the large echoing churches and the roar
of streets outside its own calm place to find
Where the soft doves of peace withdraw, withdraw.

The alabaster windows here permit
Only suggestions of the sun to slide
Into the church and make a glow in it;
The battering daylight leaps at large outside
Though what slips here through jewels seems most fit.

And here one might in his discovered calm
Feel the great building draw away from him,
His head bent closely down upon his arm,
With all the sun subsiding to a dim
Past-dreamt-of peace, a kind of coming home.

For me the senses still have their full sway
Even where prayer comes quicker than an act.
I cannot quite forget the blazing day,
The alabaster windows or the way
The light refuses to be called abstract.

My witgepleisterde graf.
Pauline Theart (unpublished)

uit duister ontvlug die gebou.
die skadu 'n afgekapte engelbeeld wat lafhartige sonvlerke vou.
in hierdie holte van die papierstad, vou die kurwes van die uitgevlekte
muurpapier origami patrone in my hand
ek wil vashou aan die oombliklike flitse, jou wang teen myne, die tee voor
jou groot eksamen, jou oë na kil woorde.
die vastrap siloette in die holte van die stilte.
teen die wange van jou mure..loop my origami tree uit jou uit....

Restourasie
P.W Buys

Vir M

Jy het die klein geboutjie deernisvol beskou
en fyn geluister na die taal van ou vermolmde hout,
verweerde steen en pleisterklei.
Voel-voel moes jy besin
waar die vervloë lyne
van die eerste grondplan loop.
Toe het jy intuïtief begin:
aanbousels van 'n eeu gesloop;
aan die vervalde rammelkas
van rousteen, sink en glas
met hamer, troffel, waterpas
gemeet, gekap, gevoeg, gelas,
gemessel en getimmer...
tot uit die amorfie van steierwerk
en rommel vonkelnuut herrys
die sober lyne van die Neo-Gotiek,
net soos honderd jaar gelede,
kompleet met gewels, misvloer, rietplafon,
spits venstertjies en dak van gras,
tot waar die aandag saamtrek by
die Boek
wat oop lê op die geelhoutkanseltjie,
beskeie klein en sedig in die hoek.

The Prophet Kahlil Gibran

Then a mason came forth and said, Speak to us of Houses.

And he answered and said:

Build of your imaginings a bower in the wilderness ere you build a house within the city walls.

For even as you have home-comings in your twilight, so has the wanderer in you, the ever-distant and alone.

Your house is your larger body.

It grows in the sun and sleeps in the stillness of the night; and it is not dreamless. Does not your house dream? and dreaming, leave the city for grove or hilltop?

Would that I could gather your houses into my hand, and like a sower scatter them in forest and meadow.

Would the valleys were your streets, and the green paths your alleys, that you might seek one another through vineyards, and come with the fragrance of the earth in your garments.

But these things are not yet to be.

In their fear your forefathers gathered you too near together. And that fear shall endure a little longer. A little longer shall your city walls separate your hearths from your fields.

And tell me, people of Orphalese, what have you in these houses? And what is it you guard with fastened doors?

Have you peace, the quiet urge that reveals your power?

Have you remembrances, the glimmering arches that span the summits of the mind?

Have you beauty, that leads the heart from things fashioned of wood and stone to the holy mountain?

Tell me have you these in your houses?

Or have you only comfort, and the lust for comfort, that stealthy thing that enters the house a guest, and then become a host, and then a master?

Ay, and it becomes a tamer, and with hook and scourge makes puppets of your larger desires.

Though its hands are silken, its heart is of iron.

It lulls you to sleep only to stand by your bed and jeer at the dignity of the flesh.

It makes mock of your sound senses, and lays them in thistledown like fragile vessels.

Verily the lust for comfort murders the passion of the soul, and then walks grinning in the funeral.

But you, children of space, you restless in rest, you shall not be trapped nor tamed.

Your house shall be not an anchor but a mast.

It shall not be a glistening film that covers a wound, but an eyelid that guards the eye.

You shall not fold your wings that you may pass through doors, nor bend your heads that they strike not against a ceiling, nor fear to breathe lest Walls should crack and fall down.

You shall not dwell in tombs made by the dead for the living.

And though of magnificence and splendour, your house shall not hold your secret nor shelter your longing.

For that which is boundless in you abides in the mansion of the sky, whose door is the morning mist, and whose windows are the songs and the silences of night.

Lig van buite splinter teen die luik,
die tralieruite,
filtreer deur kantgordyne
yl en tentatief,
skemer raaklings oor die plint,
die snyl,
die sponning in die muur,
die swarthout balk,
die wit korbeel,
die nis,
die uitstalrak.
Klein pottebakkersskruik van Traute Brück,
die rakuoppervlak,
skaars waterdig en windgebars,
'n dofwit mosaïek
in delicate, fyngetakte swart.
Konvekse buik
pregnant en vol en vroulik sag
die slank boog van die elegante nek.
In hierdie klein stillewe
is stof en vog en wind en vuur,
boustowwe van die groot heelal,
deur baie pyn herskep
en saamgebind
tot vreugde van die skoon en brose onverganklikeheid
van keramiek.

The Lost Symbols

Elizabeth Jennings

Missing the symbol they restore the fact:
How seven years back this city was burned down
And minds were gutted too. Men learnt to act
As though there were no meaning in the town,
And chose at last to make as derelict
All dreams they fostered. Dreams are also one
With walls and roofs and they like ashes lie
When a fired city cries for elegy.

Soon stone was piled on stone, another city
Replaced the ruin with its shadow and
Men walked in it but knew it had a beauty
Not like the one that burnt beneath their hand.
The dreams would not return. Men's minds were weighty
With all the sense of searching for land
Revealing symbols that a man might hold
Within the heart and form those symbols build.

It is the fine tradition they have lost
That spoke in architectural styles, that rang
Out with the bells when all the bells were tossed
And voice spoke up in the sounds and sand,
And men put feet down firmly in the dust
That flowered a legend and the legend was
Their way of life and a man's peaceful cause

Now they assemble all the facts to learn
New symbols. For their minds are so constructed
That every fact they must to image turn
And dream new dreams when towns are resurrected.
The meaning is not clear- the burning down
And the charred minds they would have all collected
In vision to be lived. The only style,



The Planners

Elizabeth Jennings

Some who fell in love with lack of order
And liked the random weather, were made angry
Accused the planners thus "It is not brick
Only you set upright and scaffolding
And the roof bending at perfect angle,
But all our love you end in measurements,
Construct a mood for any moment, teach
Passion to move in inch not by chance'.

And swarming from the forest to new houses
They chipped the walls a little, left footmarks
Across the threshold, would not scan each other
By clock or compass, terrified the silence
With rough words that had never been thought out.

And builders, poets fell upon them, saw
A just disorder for their alteration,
Would turn the conversation into music,
Tidy the house and form the lovers' quarrel
Shape a whole scene with middle, end, beginning,
Never be wearied of the straightening out
Though would not recognize they fell in love
Most deeply at the centre of disaster

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