A Creative workspace in the City

Design Research Report
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CONTENTS

This document is divided into 3 sections:

1. THEORETICAL FRAMEWORK:

This section consists of a major component of the theory research paper and aims to sets about framing the theory that informs the design process. It outlines my initial enquiry which began with the interest to explore alternative modes of spatiality that signal a shift

from the absolutism of space.

2. THE DESIGN OF A CREATIVE WORKSPACE :

This section takes a closer look at the design of a creative workspace in the city in response to the emerging trends of working that have come to being, in the last few decades. It is about a search for an appropriate architectural response for a (creative) work space in the city with reference to the theoretical ideas of space already explored in the first section. Showing how the ideas of spatiality

are reinforced through the design.

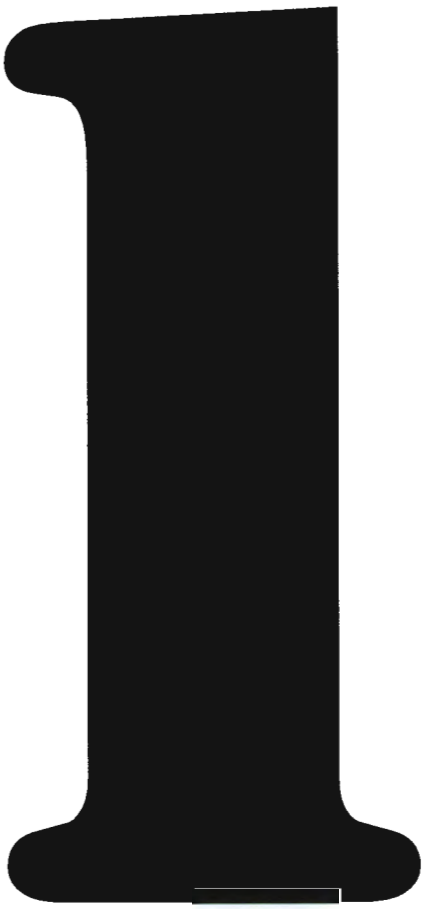
Programme

site

design

3.TECHNOLOGY EXPLORATION:

This section will look at weaving as an anlogy for architectural design and making, together with how this informs the design conceptually and also in terms of surface articulation building.



THE THEORETICAL FRAMEWORK

This section will aspire to merge my exploration of space, both in theory and practice.

"Architecture is the thoughtful making of space: the continual renewal of architecture comes from changing concepts of space." Louis Khan

MY ENQUIRY

1.

My belief is that Architecture needs to be more liberating, allowing events to unfold. Architecture needs to be life enhancing and enriching. I believe the Architect is the enabler and not the author. Architecture is about: The creation of Space but at the same time, it should allow for one's own interpretation of the space. My initial exploration was greatly inspired by a need to challenge the conventional and traditional ways of thinking about space and socio-spatiality in Architecture, a desire to rethink spatial requirements based on outdated theories of social behaviorism. It began as a search for an alternative mode of spatiality that signaled the rejecting of the notion of "tight functionalism" that governed the majority of modernist thinking.

Although Architecture is both formal and visual and it is true that however much we may prefer to discuss architecture in terms of visual styles, it's most far-reaching practical effects are not at the level of appearances at all, but at the level of space. Architecture is about structuring a system of spaces by giving shape and form to our material world in which we occupy and move. My preposition is one of an architecture that moves beyond form and a search for stylistic modes of operation to an Architecture that has a direct relation- rather than merely a symbolic one to social life.

I believe that to totally discard the social agency of architecture and how it can have a profound determinative effect on social relations is naive, but equally also to believe that the relation is entirely absent is irresponsible as an architect. There is no doubt that Architecture provides the material preconditions for the patterns of movement, encounter and avoidance which are the "material realization and sometimes generator of social relations ".(Hiller and Hanson 1997,5).

The search for a new mode of spatiality in a contemporary context that offers freedom to its occupants requires us to move away from traditional modes of spatiality, in order for new ideas to emerge. Leaving space open, loose in a sense allows for difference to flourish, it allows for unpredictability, the unforeseen to take place.

"The predetermined self- referential sculptural presence of today's buildings is no longer the primary means by which architecture is made to communicate; this approach has been transcended by a marriage of process, socio-spatial concerns and adaptations to new information and use" (Bullivant 2005,10).

"ZIMMER"

"These are beautiful plans which you just say "zimmer". You do not say dining room having designed so you can fit six chairs and nothing else,you jus say Zimmer and people will occupy the space as they wish." Brauno Taunt

2.

Architecture is not what it used to be. We are in the exciting process of re-inventing the identity of the profession as a whole, re-invigorating it with new processes and testing its limits, but along with this we are moving forward, striving to remain relevant and finding new unconventional,yet effective solutions to better deal with the challenges we face today. We have since moved away from the modernism impression that architecture could solve society's problems. Architecture now embraces multiplicity

"Architecture is no longer about predetermined ideas linked to existing social codes, the aim now is to find the means to invent new typologies and morphologies that promote the hybridizatien of space. "(Bullivant 2005,36)

"There no longer is a single utopian vision and the fccus is instead on detectable patterns in society in order to disassemble the great paradigms of references into chains of small local decisions" Zaera Polo

This approach to design acknowledges how the concept that architectural decisions about built form and spatial organization have social consequences.

3. Outcome.

[Space where you can: "Choose what you want to do……." Cedric Price]

The theory research project aims to support a design project that will deal with the idea of spatial freedom and the contestation of the false logic of space in a determinist sense. A project that has a strong public significance, one that allows for social life to unfold in unpredicted and multiple ways, one that explores space that is planned beyond the conventional fixed spatial standards that exist within our practice. Where spaces possess possibilities and is imbued with multiple meanings, interpretations and representations. It will encorporate spaces that possess a degree of looseness, that opens space to new perils, to new possibilities that are both liberating and contain in them richness- of complexity and contradiction. Space that opens up opportunity for a potential that is unforeseeable and cannot be planned; space with innate possibilities, with extra potential". (Ruby 2002,80)

The project that aims to offer a series of controlled and uncontrolled spaces, a project that creates permeable borders between spaces of , leisure and social activities, allowing for chance encounters and cross fertilization, but also with the aspiration that aims to strengthen communication between the different parts of the innovation process in the proposed programmatic scheme.

4.

It is crucial to understand from the onset that although the following investigation is both about altering the very nature of a space physically (flexibilty),(this is not the main focus) thus rendering it to multiple uses and configurations. This project is predominently about designing space within a building that the user and occupants can have a degree of control in their interpretation and use of the spaces. This is also not an argument for an anarchiac "anything goes" but instead suggests that space must be left in politics for difference and ambiguity to flourish within a shared background.

This is an inside | outside approach to Architecture, that prioritises the pursuit of prioritizing spatiality in the project of architecture today and aims to define space less as a quantifiable object and more as an idea, a way of seeing, act of making and way of engaging culture and society. It is a reflective and critical process of discovering ways in which we can start designing unprogrammed space, loose space, inclusive space that supports social interaction and freedom of action in architecture today. The aim is to look briefly into the existing social spatial discourse , but also allowing the recognition of new ideas on spatiality that are taking root in contemporary discourse to surface. Using this information, I will explore how they can effectively be applied to architecture in the quest to imagine a new emergant spatial practice that reflects a new democratic order in a South African context.

WHY IS THIS RELEVANT TO THE PROJECT OF ARCHITECTURE IN SOUTH AFRICA?

The significance of this investigation lies in a paradigm shift that is necessary in architecture especially South African Architecture, a shift towards the appropriation of a different spatial thinking as the main driver of architecture, as an entry point into design. One could argue that most modern environments are "socially bad". It seems as though most of these environments are lifeless, unpleasureable and deserted environments. We need to make architecture that begins to accommodate, as a shock absorber, those needs and those desires". (Till 2008,3).

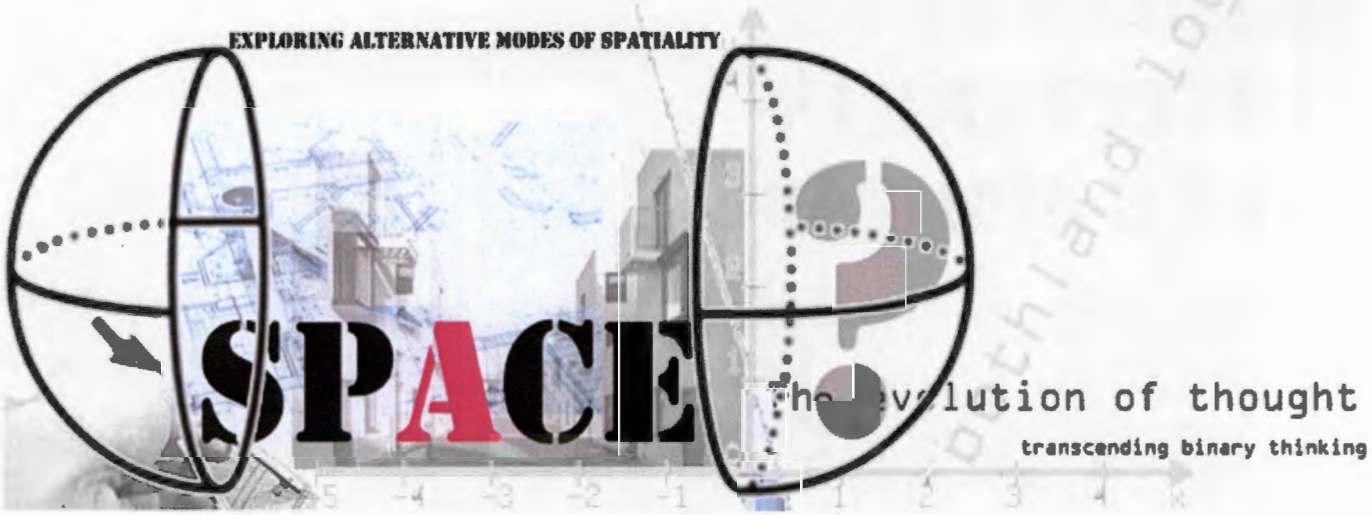
According to Lucille Davie in her text titled "Joburg's freedom Architecture":

"Apartheid buildings are almost always recognisable by their closed, exclusive nature, often imposing an uneasy presence not easy to ignore"

How then do we start to make Architecture that addresses a new kind of space that begins to reflect the new democratic order that we so often refer to and attempt to address as Architects operating in the context of South African after Apartheid? What we need is architecture that possesses a degree of spatial freedom, which is inviting, allows for interaction as most of its spaces are connected, one that is open-ended and comfortable enough to accommodate various interpretations instead of restricting its users. An architecture that epitomises a young, open society offering creative spaces that allows people to mingle freely according to Mphethi Morejele.

"It is more spatial than visual," says Mphethi Morejele, architect with MMA Architects, He says this

Architecture that is more open-ended, giving a sense of identity with the space - allowing for what he calls a "baggy space".


EXPLORING ALTERNATIVE MODES OF SPATIALITY
SPACE
The evolution of thought
transcending binary thinking

Where do these ideas on spacialty come from?

BACKGROUND _ THIRDSPACE

[The theory and Theorists, Architectural relevance]

The idea that initially captured my imagination in terms of re-thinking socio-spatiality was that of "thirdspace"- as a cultural, social and spatial concept. A concept that seemed to not only act as a social tool but also a spatial one that presented an opportunity to question the over determined and absolute way of thinking. The idea of spatiality that is on the one hand prescriptive and restrictive and reduces everything to black and white, this or that, without giving room for the inbetween, the either this or that, the both| and. But on the other hand the kind of thinking that does not encourage social activity and spatial freedom.

This was the starting point that allowed me to further enter into a critical exploration of spatiality through the deconstruction of binary thinking and an investigation into a "both|and" logic, drawing from various theoretical frameworks to build a foundation. The aim is to bring together a level of theorizing and a range of interpretations that inspire new ideas about the continuing relevance of the "thirdspace" frame work for alternative thinking. (Ikas 2009,9) These intermediary spaces - thirdspaces- were explored by Lefebvre, the "Maitre a penser" by Foucault and his concept of heterotopy, but also by Bhabha and Soja. I have chosen the following 3 theorist to highlight the concepts that I am exploring. Although these theorists are located outside architecture their influence on the subject allows us to enter into discussion about the way we as architects can approach liberty in spatial design. Because space is both abstract and real, I will explore these abstract concepts and extract how they can inform the process of rethinking spatiality in Architecture.

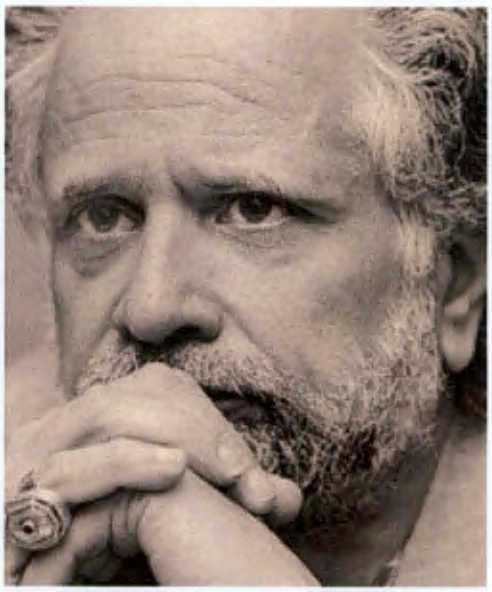


fig: 1 resource: www.google.com/ images. accessed 14 June 2010.

THIRD SPACE – HOMI BHABHA

In cultural discourse "thirdspace" as a concept explored by Homi Bhabha is a buffer between 2 colliding\ contradicting entities. In his concept: "thirdspace" displaces the histories it emerged from and something new and unrecognizable emerges. Thirdspace despite its exposure to contradictions and ambiguities provides a spatial politics of inclusion rather than exclusion. According to (Meredith 1998,5) in his critique on Bhabha: the concepts of hybridity and thirdspace contribute to an approach that avoids the perpetuation of antagonistic binarisms and develops inclusionary, not exclusionary, multifaceted, not dualistic patterns of cultural exchange and maturation.

"The Thirdspace signals new signs of identity and innovation, sites of collaboration and contestation"
(Bhabha 1994, 6)
It is however safe to conclude that the term here is somewhat employed as an "umbrella" term to almost anything that makes reference to a post colonial condition of deconstructing binaries, culturally, socially and spatially. What is evident is the openness of this "thirdspace" that he speaks about and its ability to accommodate difference and embrace multipicity. There is a degree of openness and flexibility of this in-between space. (Ikas and wagner 2009,128)

Spatially this affords us to assume a condition that embraces simultaneity of the both\and. By harnessing the potential of the "thirdspace" to overcome the binaries set up by modernist thinking, therein lies the opportunity to produce something totally different. "A mode of articulation, a way of describing a productive and not merely reflective space that engenders new possibility" Bhabha (1994).
A space that is open-ended, that is either | or, a space that gives people the opportunity to appropriate and interpret it individually. A space that opens up a wide range of possible scenarios that are not or cannot be foreseen, but are accommodated for because it does not have a prescribed function to it.

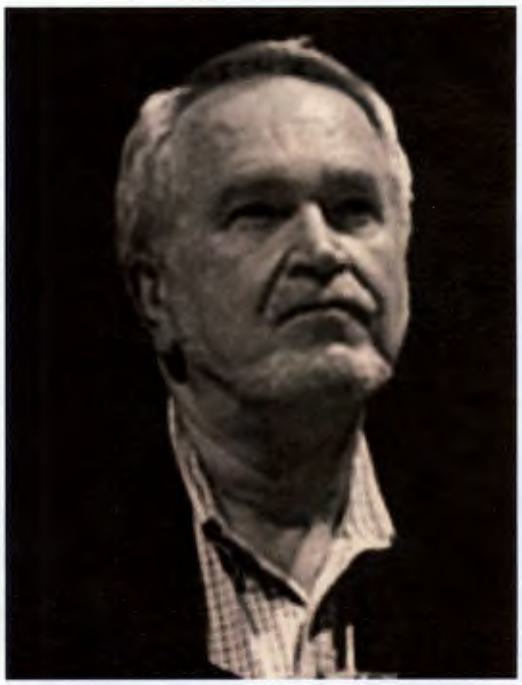


fig: 2 resource: www.google.com/ images. accessed 14 June 2010.

EDWARD SOJA

Soja presents some interesting views on space: drawing inspiration from mainly Lefebvre, but also from contemporary critical studies that have experienced a significant spatial turn. He uses the term as an organizing theme for new ideas on spatiality. In Soja's writing, what is fascinating is that he is constantly probing the "intercises of yes and no, black and white, centre and periphery, same and other. Westphal (2008:111). Shifting meaning away from absolutism and into the realm of ambiguity and contradiction.

According to Soja's, from this angle, space appears heterogeneous, opening into the multiple, and conducive to an affinity of perspectives. Here the "Thirdspace" represents a dynamic realm in which established binaries/dualisms that dominate the contemporary cultural understanding (such as subject/object, social/historical, centre/margin, real/imagined, material/mental) are reworked in an effort to open up other possibilities for understanding. He acknowledges that space in essence is made up of scattered zones that are mixed, double, multiple and open- intermediary spaces.
These notions can be applied architecturally as a concept that again signals an openness to the constantly shifting and changing milieu of ideas, events, appearances and meanings that constitute our understanding of spatiality. Soja looks at the concept of thirdspace as a means of expanding and challenging the scope and practical relevance of how we think about space and such related concepts as place, location, landscape, architecture, environment, home, city, region, territory and geography.

In his conception of spaciality he makes a reference to it as a continuing dialogue between different modes of interpretation. He further describes " third space", as a risky space on the edge, a space filled with contradictions and ambiguities and as a concept rooted in a recombinatoral and open perspective. This Affords us to explore this notion in terms of design in architecture by creating space that absorbs instead of restricts, one that simply allows a variety of interpretations and occupation and encourages social activity and interaction. Referring to thirdspace and Sojas position Rob Atkinson noted that: "such an approach to spatiality involves never accepting the finality of knowledge, always seeing a conclusion as preliminary- a staging post on the way to somewhere else"

This describes an approach that moves beyond absolutism and suggests a potential of space, the possibilities inherent in unprogrammed space and the multiple, ever-changing interpretations it posses.

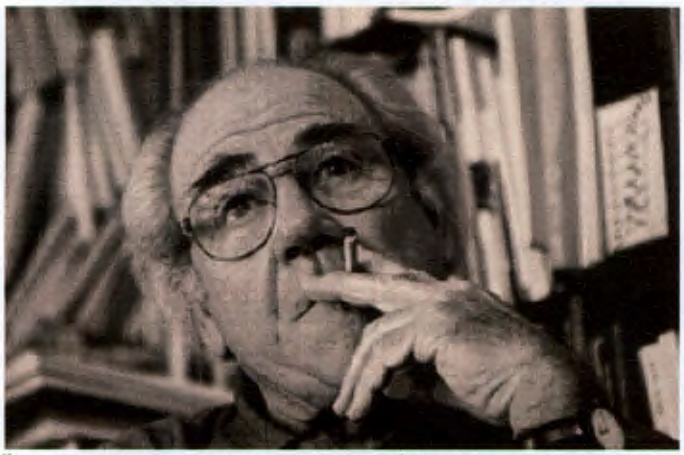


fig: 3 resource: www.google.com/ images. accessed 14 June 2010.

HENRI LEFEBVRE

Lefebvre is usually regarded as the forefather of socio-spatiality. But also central to his argument is the realization that space is not inert,neutral, and a pre-existing given, but rather, an ongoing production of social relations. "So that the processes of life are inextricably linked with the production of different spaces," according to Lefebvre. He also states: "social space is not a thing among other things, nor a product among other products: rather, it subsumes things produced and encompasses their interrelationships in their coexistence and simoultaneity"

He also points out that social space has the potential to permit fresh actions, potential to suggesting others and prohibiting others, acknowledging that social relations exist to the extent that they possess a spatial expression: they project themselves into space, becoming inscribed there, and in the process producing that space itself." Thus social space is a field action and basis for action". (Benko 1997,20)

CRITIQUE

Although these theorist have written about abstract notions of space,these concepts may have architectural implications and assist us in thinking about space in more liberating ways.

ARCHITECTURALLY THIS SIGNALS:

An openness and undetermined zone of functionality in space

Multiplicity: inclusion rather than exclusion

An ongoing dialogue of appropriation and interpretation by the user

A support of social interaction and activity

Both | and logic: Ambiguity and simultaneity

RELATING THESE NOTIONS TO ARCHITECTURE

1 .SPATIAL GENEROSITY

"No longer a big space but a space that offers capacity". Lacaton and Vassal

The space of functionalism is a space designed to be the smallest that can fulfill one idealized purpose. e.g.
"Kitchen is a laboratory for cooking, the bedroom a place for sleeping" (Till 2008,133) with no room whatsoever for anything else to take place but the prescribed function. Buildings today only offer extremely controlled functional spaces, that are very limited and don't offer anymore than what the space's intended use. Space is measured out by the standard occupation requirements, which are often the minimum requirements required for the space to serve a very specific function or use. Through slack space the possibilities are infinite and control is given to the user. "A shift in meaning, this process is a dynamic one, for meanings and uses are always liable to change". (Reijndorp and Hajer 1998,100)

The following is an exploration of instances where space can offer multiple readings and interpretations that allow its users or occupants a degree of freedom but also allows for interaction. Architecture is a dynamic by nature, we need to provide for uncertainty and the unforeseen in order to create richer environments that rather than inhibit, allow uncertainty to flourish, allow users the opportunity to define their environments and interpret as they see valuable.

"The form and program of any particular painting remains fixed forever in time, whereas in architecture, ever changing demands and uses are either accommodated or resisted by the building, but this very instability of the temporal inhabitation of buildings, is a part of the force that drives the discipline as a whole to novelty, in that it is constantly being asked to address new and changing problems. " Reiser &Umemoto (2006: 203)

2."SLACK" SPACE

Slack space or sometimes termed "extra space" or "open space"- is an unassigned and open space, open to appropriation by its users. Slack space enables us to rethink architectures manifold possibilities, to think about architecture, not as a thing but as a production of space, time and social being. (Borden 2001,26) It is space that is able to create a larger capacity and generosity of uses and is able to accommodate a variation of meanings and interpretations. It supports social activity and interaction. According to (Patteeu 2009,36): "These open ended spaces possess qualities, possibilities that induce various appropriations and uses". There is a level of indeterminacy in these unallocated spaces; the space is undefined to a certain degree. It can also be an adaptable space without any predefined function. It enables a wider choice of activities and most importantly it allows difference and ambiguity to flourish.

This space can also serve as a blurring of boundaries between inside and outside, private and public, formal and informal and allows the user a degree of freedom to define it as they see appropriate; it gives the user a degree of control over the interpretation and meaning of the space. The architect ultimately cannot control events in space. What is exciting and liberating about these types of spaces, is that they allow for unplanned, spontaneous and accidental activities to take place. They offer chance encounters. They are the "soft" spaces; Peter Barber speaks about in his writings, these spaces are the background architecture, which are just as important as the architecture of the foreground but still need to be designed effectively.

Fig 4: pause spaces along the circulation route for informal meetings. resource: www.google.com/ images. accessed 29 August 2010.

Fig 5: external balconies of Hellmustrasse by ADP in Zurich, circulation made generous to allow for more uses and occupation and not merely a means of access from one level to the next. resource: Till, J. 2008,29

3.EXTRA SPACE AND ITS POTENTIAL

CIRCULATION

There is an inherent potential and opportunity of internal and external circulation to provide more uses than simply moving around. Traditionally circulation, particularly within space standards, is always reduced down to the absolute minimum requirement, contrary if you just increase it a bit then it opens up its potential to become useable for other purposes. Simply through the act of increasing its dimensions circulation becomes something more than a means of movement

The Hellmustrasse by ADP in Zurich is a perfect example of this. A bit of generosity on the external communal balconies allow for social life to unfold which is not allowed for within standardized circulation systems.

Fig 6&7: Peter Barber housing scheme- Donnybrooks, which offers its inhabitants an unprogrammed threshold space that mediates between private and public life. There is also a sense of security and surveillance as a result. resource: Till, J. 2008,80

THRESHOLD

The threshold space is a very interesting and possibly rich space. It is a space that can be imbued with complexity and ambiguity, a space of pause, freedom and boundlessness; it belongs to its occupier at the time, but belongs to everyone simultaneously. It offers up possibilities of encounter and interaction. It's a transition zone that has a temporality about it, an area of transition, to stop and chat to a neighbor, greet the postman or where children can play safely.

Its design opens up a range of possibilities and through mediating between the binaries set up by modernist thinking can flourish into a place of richness, both in its perception and in its lived reality. However the space could offer more, through seating opportunities that would allow the inhabitants to occupy the space for even longer; they could linger around, read a book or have a conversation with a neighbor. It could also allow children to play and activate the space even more. "Since the self is not designed to fit perfectly into anyway of life, we should therefore endorse the idea of slack as part of our conception of good life" (Till 2008,133)

In his Donnybrooks housing scheme, Peter Barber talks about how humans are sociable animals and that having a space in which to meet and talk to neighbors immediately outside our homes is also important in giving a sense of shared ownership of our local neighborhood. This threshold space is important in setting up a dialogue between individual and public. This space is based on Cedric Price's initial role of "unprogrammed space"

This is in contrast to the block of flats that I once visited, where there is no opportunity to pause, to linger around and meet someone, space had been reduced to the bare necessity, the dimension of the corridor allowed for only two people to cross each other without touching, the space was uncomfortable, and eye contact avoidable with anyone. This created a very "bad" space as social interaction was prohibited by the design of the space. Once one entered the building, one was confronted with a need to immediately reach ones destination. A perfect example of tight functionalist space.

4. HARD | SOFT SPACE

"Hard space is a prison"

"In the soft version of space, whether it is soft moving partitions or soft space through indeterminacy, or slack space, excess space or whatever, you actually passing over control to someone else." Till (2008:5)

Jeremy Till explores the dialect between hard and soft space in both his essay titled "Space at home: Soft space" and his book titled "Architecture depends". He describes "hard space" as determined space- space which determines how one uses it- and soft space as indeterminate space, space which is soft enough to allow multiple uses to take place within it,in use and technology. In this version of space - hard space the architect acts in the foreground. In soft space he is still there, but this time acting in the background. Soft space according to Till, does not presume to control or divide in the same way that hard space does.

In Brauno Taunt's plans and his version of soft space, "You do not say dining room, having designed it so you can fit six chairs in and nothing else, you just say "zimmer" and people will occupy that space as they wish." The space is designed in such a manner that one can appropriate meaning to it as they wish. This suggests a somewhat looseness of space.

The design challenge that presents itself, is the question of the nature of this space. What are the qualities and formal aspects this space possesses? How can the design of this space be maximized to their fullest capacity to allow for the appropriation of variation? What is defined and what is left undefined and to what degree?

CRITIQUE

Space needs to be larger than standard size, but most importantly larger in capacity to accommodate difference.

Space should be less prescriptive and requires an openness to interpretation.

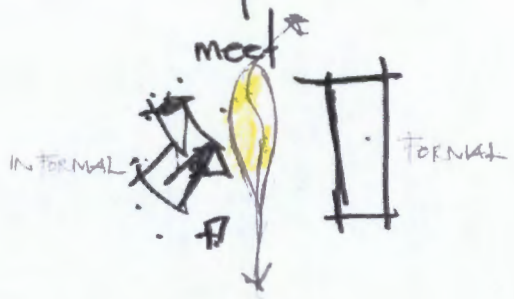
There is opportunity at the threshold and circulation

In this space, opportunities for seating, but also retreating away are essential.

The space should be able to accommodate change in use or function over time,

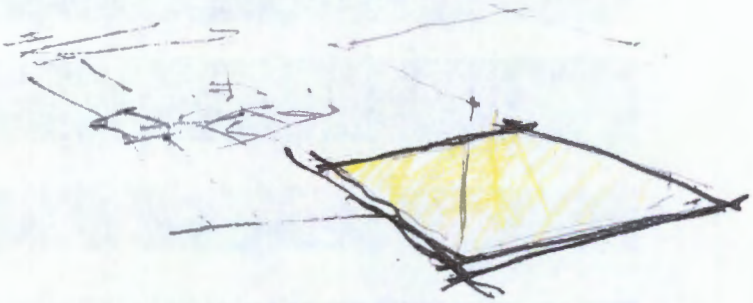
THE INSTANT WHERE :

← FORMAL | INFORMAL



← INSIDE | OUTSIDE

THRESHOLD



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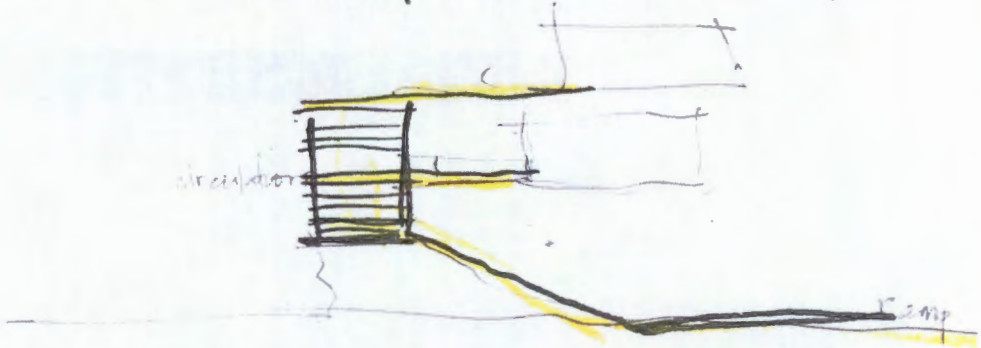


SLACK SPACE · UNLOCATED · THIRD SPACE
EXTRA SPACE · UNPROGRAMED · OPEN ENDED SPACE

fig: 8 (enloge)

PRECEDENT EXPLORATION

"Citizens create meaningful public space- by expressing their attitudes, asserting their claims and using it for their own purposes." Reijndorp &Hajer (1998:101).

The following is a closer look at 3 precedents that deal with the idea of unprogrammed space; it is an attempted to unpack the ideas of spatiality within them.

1. **Leslie Social, University of Cape Town, this is the social science buil**ding that houses lecture rooms, reading spaces, cafeterias for studies across camps. The building is designed in such a way that it allows for social interaction and meeting. It is also spacious and contains a series of fixed spaces, i.e lecture halls and "slack" /informal spaces that are freely used by the students, who may not be part of the faculty of Social Sciences.

2. **The Nantes school of Architecture, Lacaton and Vasal.**

3. **First phase St Cyprian's school - Teaching Hubs- Cape Town by Jo Noero**

fig: 9 panaromic veiw of the "slack space in the Leslie Social building.

1.SLACK SPACE: LESLIE SOCIAL, UCT CAMPUS

The Leslie Social Building is a fit example of the functioning concept of "slack space". The main entrance to the building is characterised by a large open unprogrammed space. This space is not too wide and open so as to make one feel uncomfortable and uneasy. It is a sheltered, although well lit space, with various level heights and routes from one destination to the other. This space does not have a prescribed function, it is extra, generous space, with the capacity to open up to appropriation and interpretation by its users.

The space also contains within it opportunities to retreat and sit at its edges, while still offering opportunity to be within the space without being part of the social interaction and movement. One interveiw with one of the students on why they liked being in that space revealed that they enjoyed its public nature but the opportunity that the spaces offers them to be at the sidelines and watch people and be a part of the social life but still sit alone, its comfortable enough and not intemidating. It creates a sense of collective and social life, of inclusion. The three stepped floor levels create a sense of over seeing and view lines across the expanse of the space. Each level has a visual connection to the next.

What makes this space work, is that when there is no activity taking place it does not feel large and empty, or useless and wasted. Its is still comfortable and makes sense (People feel comfortable to sit on the stairs, they are wide enough to read a book and still allow traffic to flow, as opposed to the centilivres staircases (the architecture building on the university of Capetown opposite Leslie social). One would never imagine to sit down at and have a conversation, unless it is during hours where the building is not in use). Further, the Centlivers building does not offer any opportunity for interaction or pause, spaces are strictly specified, closed and exclusive. Crit room for crits, pink room for lectures, studios strictly allocated to each year, circulation for getting from one place to another, corridor for staff office. There is no space for social activity within the building. Space are purely functional and do not open up for new possible uses or intepretation. There is no discovery, no freedom of action, there is a strict order with no opportunity for sponataneity or social interaction, there is no opportunity for growth and change, like that which is enherit in the Leslie Social building.

Fig 10: Leslie social ,seating opportunity at the edges of the space.

Fig 11: leslie social :people feel comfortable to sit on the stair cases, while there is ample space for movement to occur

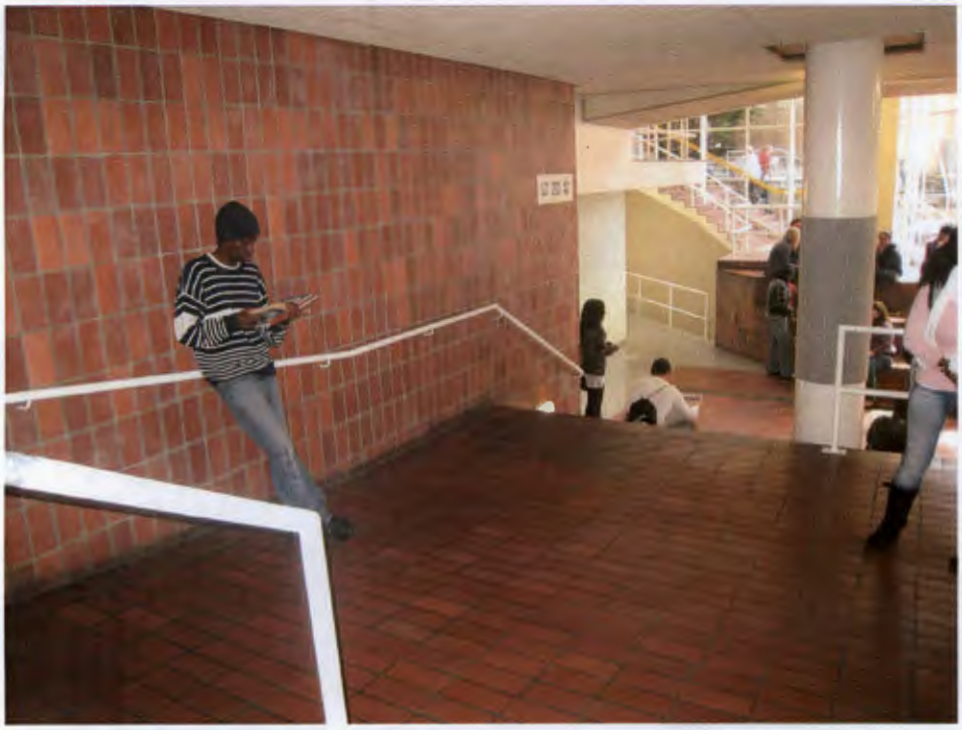
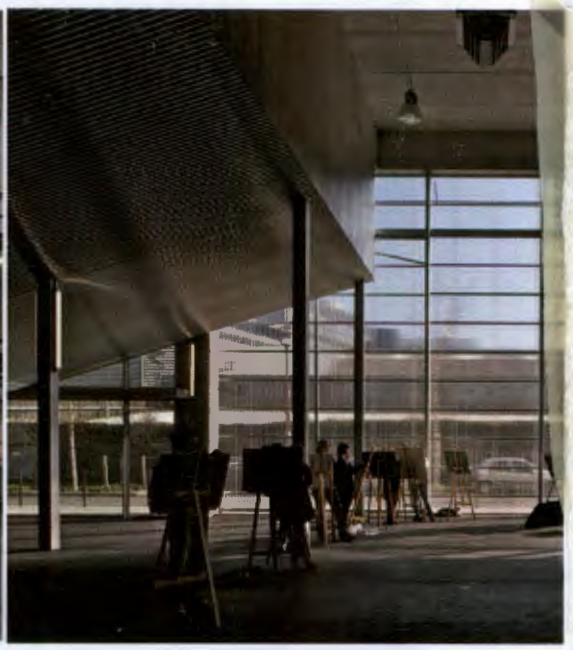


Fig 12: leslie social :the space is comfortable enough for one to retreat at any point and take possession of it. In this instance a student reading a book.

Fig 13 & 14: Leslie social one of the auxiliary spaces in between lectures and a few minutes later as students interact while waiting for their next lecture.

resource: photographs taken by author. 20 May 2010

Fig 11: Leslie social one of the interviewed students taking a break from studying and having coffee and reading a newspaper at a sunny spot on the edge of the space.



2. EXTRA SPACE :UNIVERSITY OF NANTES, LACATON & VASSAL

In this project as with many of their projects to date, the primary theme is: to achieve a maximum amount of space, for maximum freedom of use, doubling the controlled living space by means of covered but not controlled spaces. Many of the areas are labeled "espace libre appropriable" to be used as staff and students see fit, acknowledging that functions and relationships change over time. "Like a pedagogical tool, the project questions the programme and practices of the school as much as the norms, technologies and its own process of elaboration" Vassal .

In their Letapie house and earlier house Coutras, Lacaton &Vassal basically apply) the principle of "extra space" derived from the African hut. The planned living area of the house is doubled by the extra space, which makes room for activities not envisaged in the original spatial program. However the distribution of these spaces is of critical importance to ensure their success. To achieve a true added value for living, it is necessary to create spaces that are far larger than usual. This is in direct contrast to Modernist thinking that aspired to create the minimum space required.

In the Nantes school of architecture Lacaton and vasal achieved an equal amount of programmed and unprogrammed space to the required spatial programme. They question the established institutional routines of Architectural education and challenge students and professionals to define functional scenarios for programming this supply of additional space. They blurr the boundaries between social and academic activities. Space at the first level accommodates unprogrammed casual activities or at the second level structures meetings and classes. These spaces are also connected both visually and spatially.

In their work, Lacaton and Vasal undermine the apparently implicit nature of the confirmed codes of behavior of the programs they tackle and encourage the creative defiance of these conventions, instead they encourage the user to become more aware of the way they want to live and to define the forms of living appropriate to it.

This logic is strongly reminiscent of the theory of estrangement (verfremdung) defined by

Fig 15: Nantes University :an example of one of the unlocated spaces within the architectural school, that is left open to be appropriated by its inhabitants, in this instance students have gathered for an informal meeting.resource: www.lacaton.vasal.com/images. accessed 19 July 2010

Berlot Brecht "to strip an action or character of anything that appears evident, familiar and understandable about it and to arouse curiosity and astonishment about it instead" so the work of Lacaton and Vassal: places the worlds at our disposal, so that we can appropriate and alter it.

Furthermore in this project the enclosed outdoor area becomes the most important part of the school, as it offers room for the informal activities and events that significantly shape the life of the school although they were never explicitly envisioned in the spatial program.

While the original plans called for 10 000msq their plans offered 18 000msq, including 12 500msq for school life, (teaching, library, exhibition area and admin) and 15 000msq of adaptable space without any pre- defined function, moreover 8000 msq of accessible external space was reserved for students and seasonal events. The spaces in this project create places capable of hosting closely connected activities (artistical and organizational) within the building.

Although from the onset the building seems to succeed on many levels in terms of achieving a degree of spatial generosity and challenging traditional spatial configurations and requirements, although accommodating 500 students, the place still gives an impression of emptiness "Like slightly oversized clothes, of an envelope too large for its contents". According to critics the unlocated areas previously envisioned as active lively spaces are not being put to any real use and these vast spaces have resulted in acoustic problems. This free space intended to be 'open for all to use' including the general public, has been totally taken over by the administration, it somewhat failed in achieving any true spontaneity of use, that was initially intended.

From a visual perspective this is in contrary to the University of Nantes by Lacaton & Vassal who employ this concept of extra space in their design for the university,the large double even sometimes triple volumn spaces, give a feeling of emptiness when not in use. Rightfully so their work has been criticised for this.

Fig 16& 17: Nantes university: one of the "open" spaces in the Nantes architecture school, when it is occupied and at another time its vastness and emptiness when not in use. resource: www.lacaton.vasal.com/ images. accessed 19 July 2010

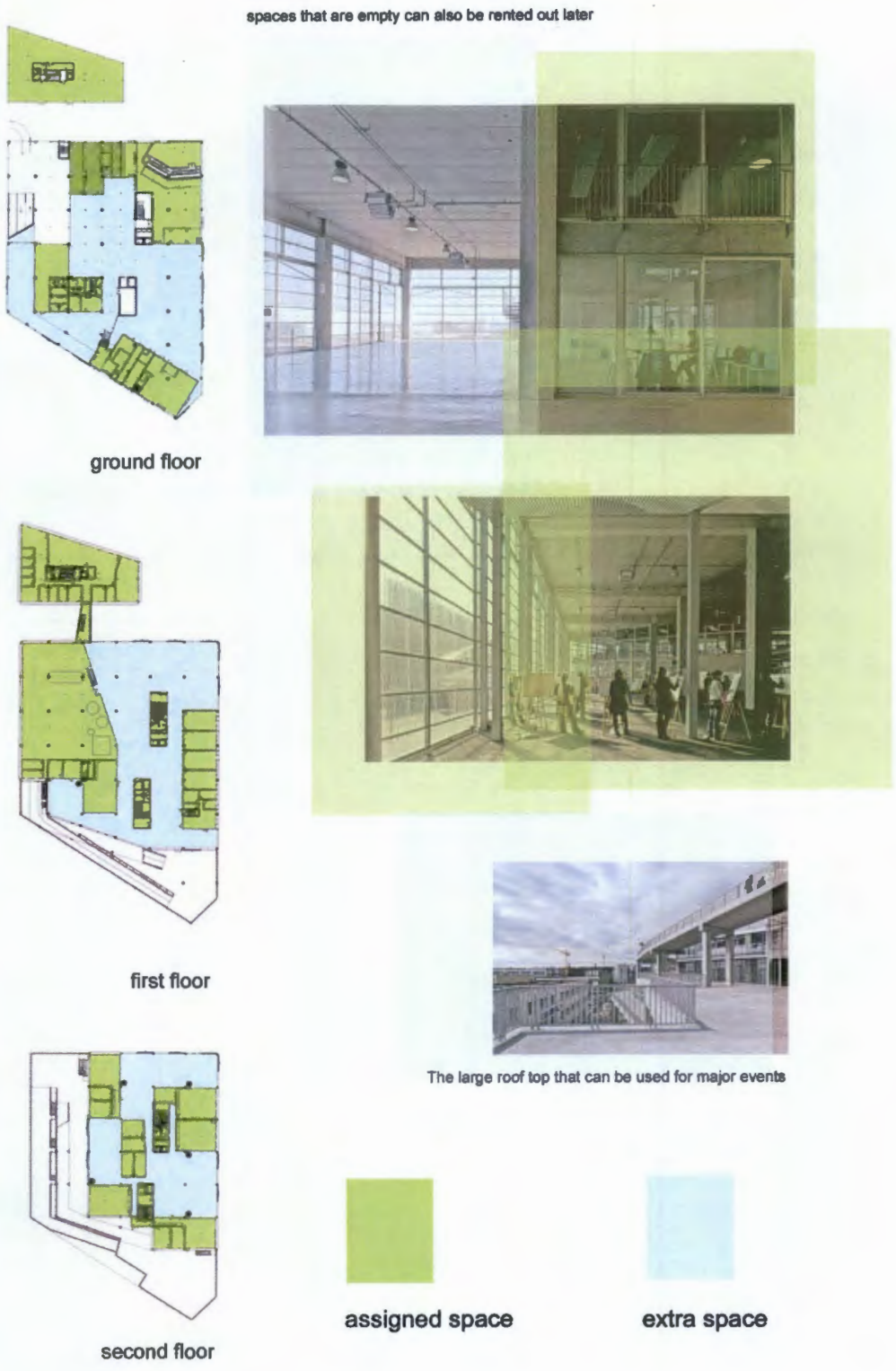


Fig 18: Nantes University :An example of a floor plan and the ratio of determined to undetermined space. resource: www.lacaton.vasal.com/ images. accessed 19 July 2010

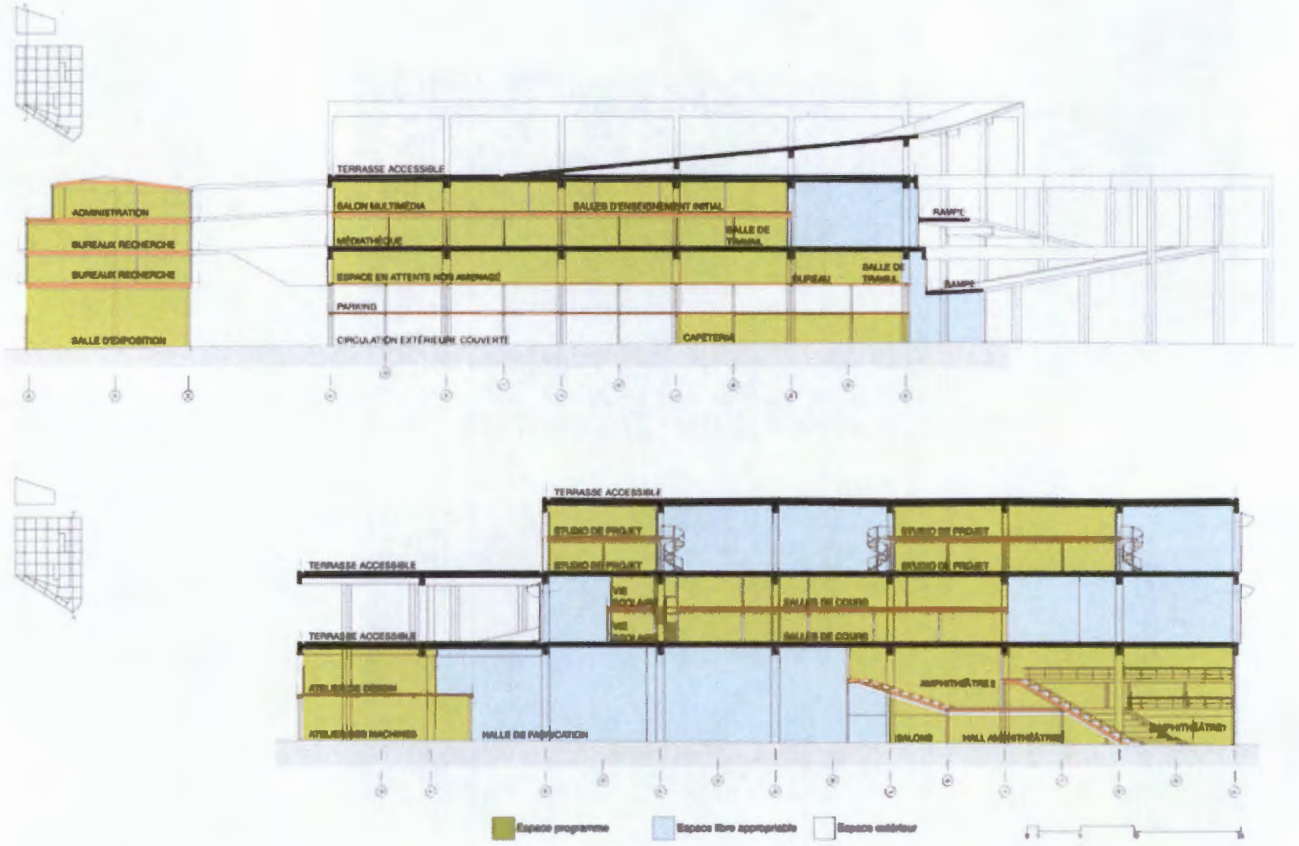


Fig 19: Nantes University: A longitudinal and cross section showing assigned and unassigned space within the building. resource: www.lacaton.vasal.com/ images. accessed 19 July 2010

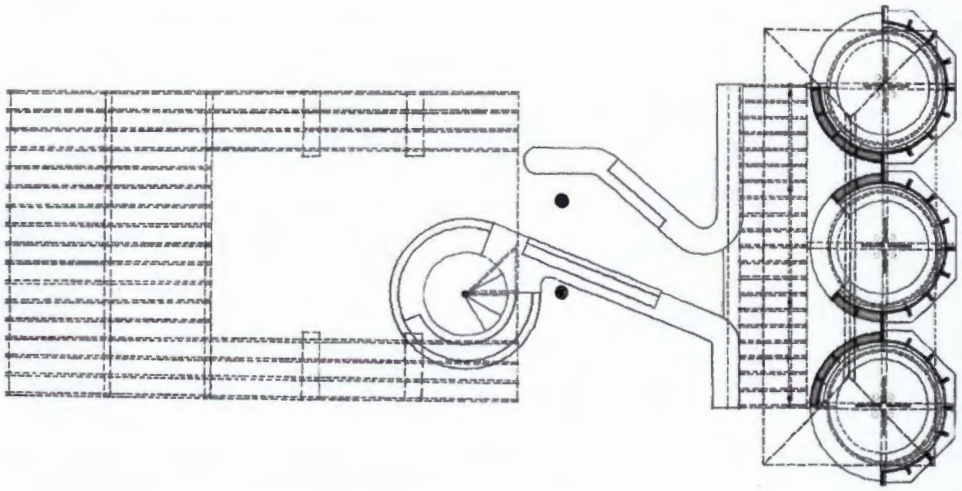


Fig 20: Teaching hubs :Plan of teaching hubs along the walkway

3.CIRCULATION : FIRST PHASE ST CYPRIAN'S SCHOOL - TEACHING HUBS- CAPE TOWN BY JO NOERO

In this project the teaching Hubs are envisioned as a new space, made by inserting new elements into the existing space in such a way as to change the use of that space according to Jo Noero. The teaching hubs are enroute to the library and offer the children a space of which they may appropriate as they wish. During his lecture on his works Jo made a very interesting comment: that "it is the younger children who feel free in this space, they accept it, take ownership of it and enjoy its ambiguity, its lack of strict determinacy. It is the older children who almost "fear" the spaces, being very cautious of it in a sense, almost as if they are not quite sure what it is they are "supposed" to do with and in them." That serving to exemplify just how prescriptive and restrictive architecture has become, that it has crippled the imaginations of inhabitants.

Fig 21: Teaching Hubs: The covered courtyard, containing the hubs. resource: Jo Noero lecture slides April 2010.

CRITIQUE

These spaces:

Allow social interaction and facilitate activity- people seem to enjoy these spaces

Must be able to change over time

Allow the user to feel a sense of inclusion or ownership

Cannot be too wide or too high otherwise they fail to be effective, double volume seems to be a comfortable height.

Opportunity to retreat and also sit becomes part of this space.

There is a sense of freedom and choice of movement and occupation,

2

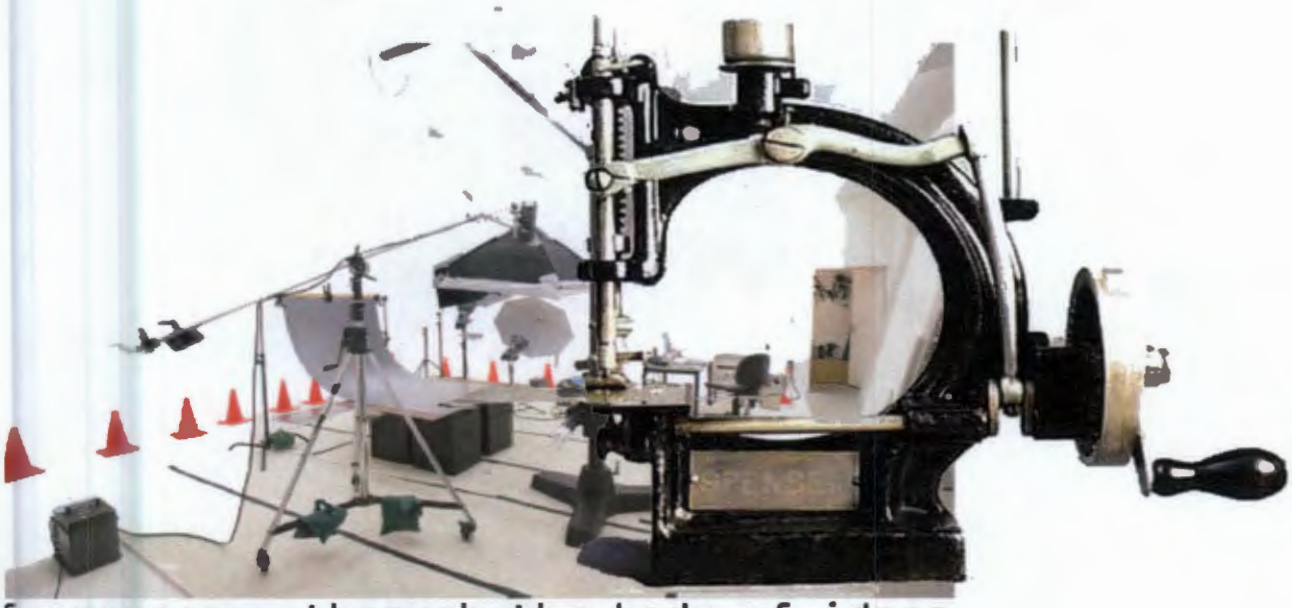
THE DESIGN PROPOSAL

1. KICK START

This section introduces the design proposal as an innovative agenda that is more concerned with experimental distinctions between spaces than establishing functional boundaries. My aim is not to simply transcribe a program into space, but to offer a truly alternative interpretation of social purpose and physical form. This project is about implementing the notions of space I have explored in part 1, in order to create effective and successful creative workspace in the city.

As previously mentioned this approach to design involves a departure from the notion of absolutism in ascertaining the value or meaning of spaces. (Reijndorp and Hajer 1998,125). It goes beyond the limitations and boundaries set up by the need for strict functionalism and assigning a specific and singular function to space, as a measure of how well a building performs,

interpretation of



f programme through the body of ideas

public building- in an urban setting

FOREGROUND BACKGROUND

POSSIBILITIES

Space

Spatiality

Binary thinking

Both/and logic

Third space

Slack space

Extra space

Open ended space

Unlocated space

Inbetweening

Undetermined space

Unprogrammed space

Baggy space

A CREATIVE WORKSPACE IN THE CITY

WORK LEARN SHARE CONNECT


TO DO:
IN THE
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explore
technologies
industry
economic
entrepreneurs
innovation
thinking
designers
including
emerging
speakers
infrastructure
Global
future
design
innovative
people
Convergence
growth
needed
creativity
open
sector
move
making
physical
ecology
track
Summit
complex
organizations
new
elements
times
Changing
industries
source
policies
key
questions
collaboration
Entrepreneurship
opportunity
Workforce
discussions
Sustainability
successful
space
Sessions
happen
impact
develop
Entrepreneurial
funding

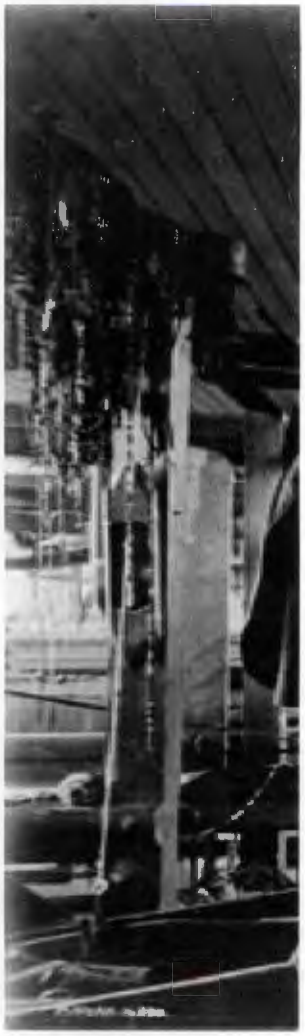
SUPPORTING,NUTURING AND STIMULATING THE CITY'S CREATIVE INDUSTRIES.

Creative industries:

refers to a range of economic activities which are concerned with the generation or exploitation of knowledge and information.
"those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property."

Through the design of a Creative workspace in the city, this project aims to deal with the idea of spatial freedom and open space by challenging the outdated concepts of working environments for the creative industry. It identifies the new and shifting trends of working and how architecture can respond to this. But also how a building can provide a range of inspiring spaces for creative interaction, discussion and networking. The creation of a building that offers affordable workspace, a variety of supporting office amenities, and a community of like-minded professionals eager to collaborate and share resources.

This is an inside | outside approach to architecture, that prioritises the pursuit of an alternative spatiality in the project of architecture today and aims to define space less as a quantifiable object and more as an idea, a way of seeing, act of making and a way of engaging culture and sociey. Spaces that encourage collaboration and interaction, and stimulates creativity and ideas.



THE OLD....

CONTEMPLATING THE NATURE OF _ CREATIVE

While society has changed considerably in the past century from an industrial society to being a service based society there has also been a focus on creative industry as a driving force for many economies. Human creativity has come to be seen as a key factor in the development of systems of innovation. In its broadest sense, human creativity is being applied to all economic and social activities; in recent years emphasis has come to be placed on the so called creative industries in national economies worldwide, partly as a result of the recognition of their substantial contribution to GNP. In the South African context in general, and the Western Cape in particular, the creative industries are beginning to be accorded greater recognition in economic development strategies. At the same time innovation is seen to be crucial to economic success and urban economic competitiveness. Developing economies are only

Fig 22: The workspace has transformed incredibly over the last few decades. resource: www.google.com/ images. accessed 12 Sept. 2010

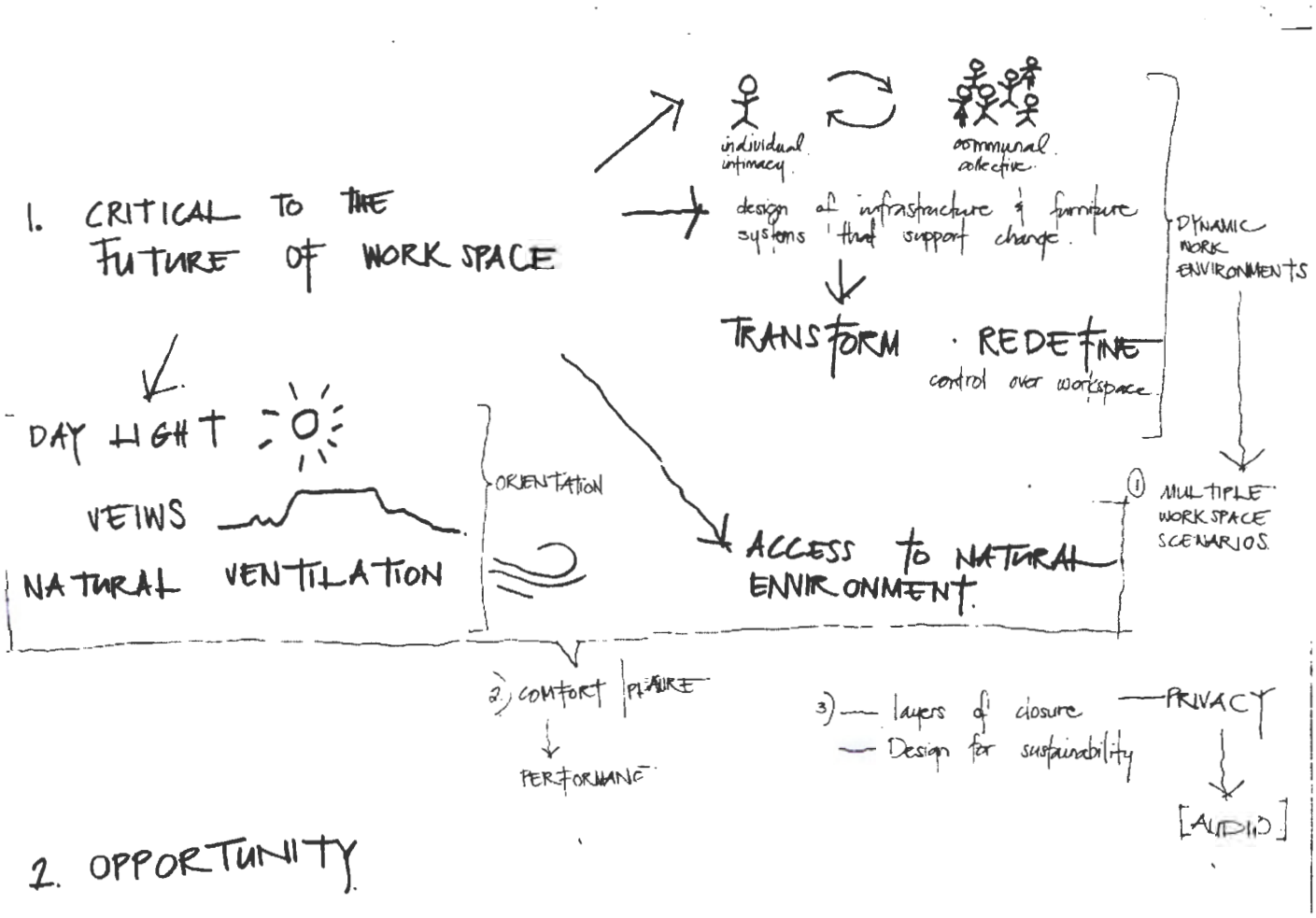
slowly coming to realize the strategic value of design.

Parrallel to this the way we work has evolved in terms of workflow, movements, conditions that reflect sociological changes. The office has replaced the production site as a centre of productive process and is increasingly becoming a market place for knowledge. There is also a need to accommodate creative industries in spaces that break the traditional office space model.

This means Architecture needs to spatially reflect these social changes and cater for the differing aspirations of workers today. The office is a place where people go to exchange information and work either alone or in teams.

Gone are the days of a traditional nine to five and cubicle, enclosed office space, governed by a hierarchical system. Today workspaces need to open, permeable and allow for networking and information exchange. Offices were once designed to keep people apart. Space planning was based on the ruthless divisions of hierachy. (Myyerson& Ross 1999,13). Workplaces were functional and impersonal and social contact was frowned upon. But the creative office, there is a growing recognition that work has a social dynamic which is productive and valuable. Old- fashioned adjancies are replaced by a new approach.

Accompanying this, is the fact that people are increasingly spending most of their time in the work environment, and then real life cannot simply be put on hold until they have left its confines. Life has to be accommodated and facilitated within the office space as well.



THE NEW....

The link between design, as an important component of the creative industries, and innovation, is strong and widely recognised in the international arena. It is explicit in most of the national design policies that have been developed by countries, to integrate design into national economic and business strategies in order to increase international competitiveness. 'Design Culture' is valued in developed economies and consciously fostered through policies and strategic interventions. It has been used by previously developing economies such as South Korean and Singapore to develop their competitiveness to a degree that places them amongst the ranks of the developed nations of the world.

LOCAL GOVERNMENT'S SUPPORT OF CREATIVE INDUSTRIES

The creative industries as a sector worthy of support and has created a unit within the department of Economic Development and Tourism


CASH
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ATIV
CAP
TOWN

(DEDT from hereon) to 'develop and grow creative industries and its complex interconnected and interrelated sub sectors, with a view to impacting positively and meaningfully on the Western Cape's economy DEDT wishes to promote the creative industries as one of the key guiding drivers of the provincial economy, developing and strengthening the creative industries' resources,skills and markets, and linkages with other sectors (Annual performance Plan 2008-2009).

THE OVERALL VISION ENVISAGED BY THE ECDI IS:

The East City Design Initiative (ECDI from hereon) will result in the premier African environment for design innovation, creativity and entrepreneurship being developed in the Cape Town Central City within the next 10 years.

It will showcase design excellence, incubate emerging talent, and enable new innovations to develop. The actual and virtual space created by the initiatives provide an environment for business, the academy, the non-profit sector and government to interact in ways that develop design in the city, province, nationally and Africa wide. Its impact locally and nationally would lead to the improvement in the quality of life, improved economic growth, sustainable solutions, and a more inclusive society.

(Vision developed in 2009 by the ECDI Founding Stakeholders)

DYNAMIC THINKERS, CREATORS AND IMPLEMENTERS

Creativity is not only about having ideas, but also the capacity to implement them. Having like-minded entrepreneurs under the same roof can have a very positive impact in the general morale of each individual and result in cross-pollination and sharing of ideas.(Dr. Raul Pacheco-Vega blog) .

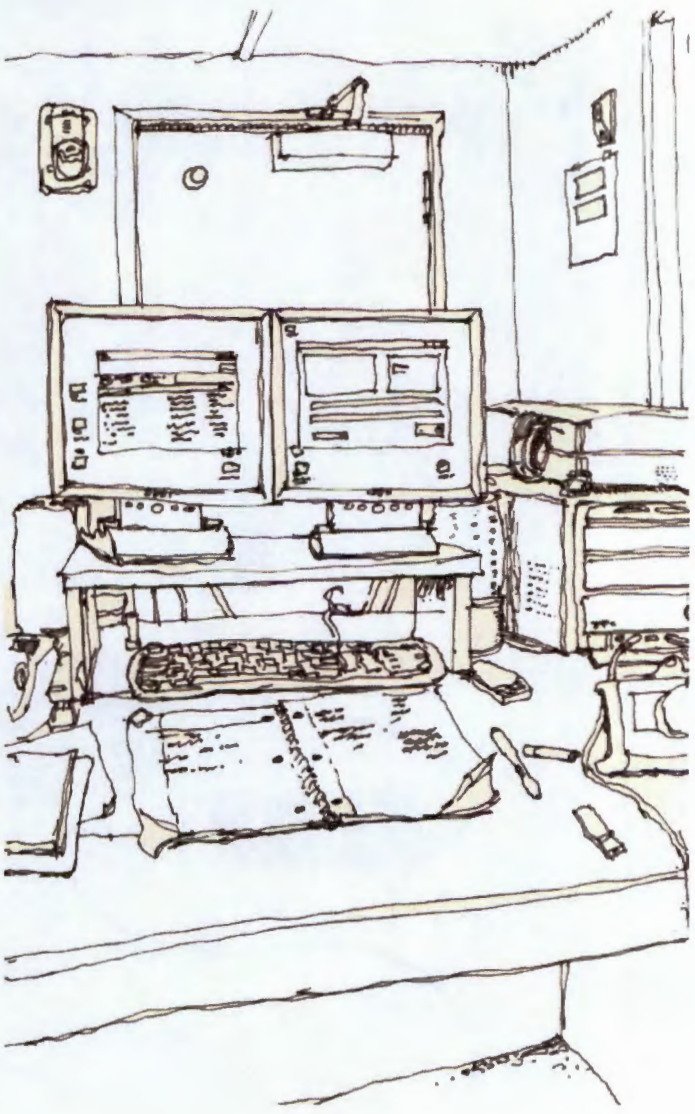
An open workspace can definitely spurs collaboration, sharing of ideas and each of the companies hiring others within the space. (coworking dynamic thinkers, creators and implementers. (blog Mike SullivanPosted September 10, 2010 at 5:57 am)


CREATIVE
CREATIVE
CREATIVE

USERS

Advertising, architecture, art, crafts, design, fashion, film, publishing, software,

The aim of the building is to provide space for both social and professional opportunity for the user, but also an opportunity for networking, be a part of a community and interaction.



1. FREELANCERS. ENTREPRENEURS.

Entrepreneurs (full time) The design sector tends to be dominated by micro-enterprises and self-employed and would thus tie in well with small business development strategies. In addition, there is a growing body of empirical studies on the relationship between effective design use and economic benefit, which is beginning to strongly support the business case for design.

2.OFFICE NOMAD/ MOBILE PROFESSIONALS:

Fig 23: resource: www.google.com/ images. accessed 20 august 2010

3. YOUNG EMERGING CREATIVES BUSINESS-EARLY STAGE DEVELOPMENT

Often the hefty start up cost of a small business proves to be a major stumbling block. The objective of the building is to provide a space to nurture young design entrepreneurs, and offer them network opportunities with likeminded creative individuals, as well as business development support. A professional business environment such as this has many attributes, this includes giving potential clients a professional impression of the business owner, it provides a neutral platform for young business owners to share knowledge, brainstorm new ideas, share contacts, encourage collaborative problem solving, generate competitive edge amongst peers etc.

4. STUDENTS

WORK SCENARIOS

The design offers different kinds of work spaces rather than a repetitive system of space. Offering users the opportunity to occupy space privately and interact publically.

There are three main types of work scenarios to choose from.

1.HOT DESK / WORK STATION 24/7 UNLIMITED ACCESS.

Hot Desking is one of several new terms which were brought into common use in the 1990's to describe a new set of working practices. It is believed that this term originated from old naval practices called "hot bunking" where shifts of sailors would share limited bunk space. Hot desking originates from the definition of being the temporary physical occupant of a work station or surface by a particular person at particular shifts to make better use of the available resources.

Discription

Open, individual working station, desk+pc, storage.
Short term, weekly rental for an hourly occupation, day or nite
Break out space and access to kitchenette
Floater singular desks

2. CO WORKING 6/ 10 GROUP WORK STATIONS

Co-working space is a space where people with different skills can come together and work side by side for inspiration.

The concept of coworking isn't really an original thought. Humans have a gregarious nature, gathering around the dinner table to break the bread and share meals. The same can be said about coworking. People like to work around others, particularly in an environment where the risk of office politics is much lower or even removed. A shift in the economic production paradigm from an industrial to a knowledge society has also contributed to the popularization of shared office space that can be rented by the hour, the week or the month.

Discription

More permanent than hot desk. (You can even bring your own chair.) Shared table, shelving and storage, semi inclosed (partitioned)

3.PRIVATE OFFICE SPACE OPTION

Discription

Most permanent, small businesses set up/ office nomad set up. 3 x3m up to 3 people 3 x9 5-9 people
Inclosed, shared kitchenette
Require a minimum six month membership
Shared facilities

PROGRAMME

Social / public spaces
Open space to facilitate direct communication
Freedom of movement.
Public art
Public toilets with showers-REFRESH

CAFÉ GRAZE (MEET)

Exhibition space x2

Internet cafe

reception: Add your business cards or brochures here, find out who's hiring and events happening

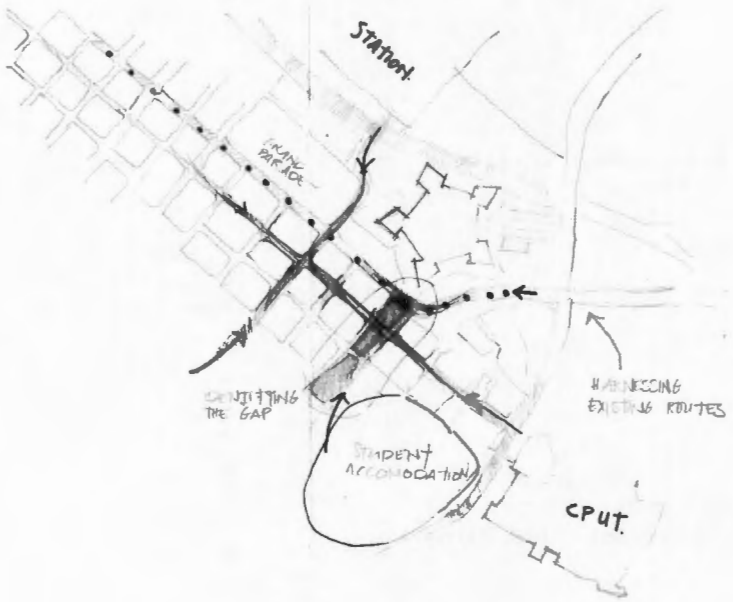
Work study area (mainly for tertiary students)
Resources, library, of business, creative and instructional books and magazines

lounge: with print, faxingw

Audio visual room x2

Recreation roofspace

student study areas

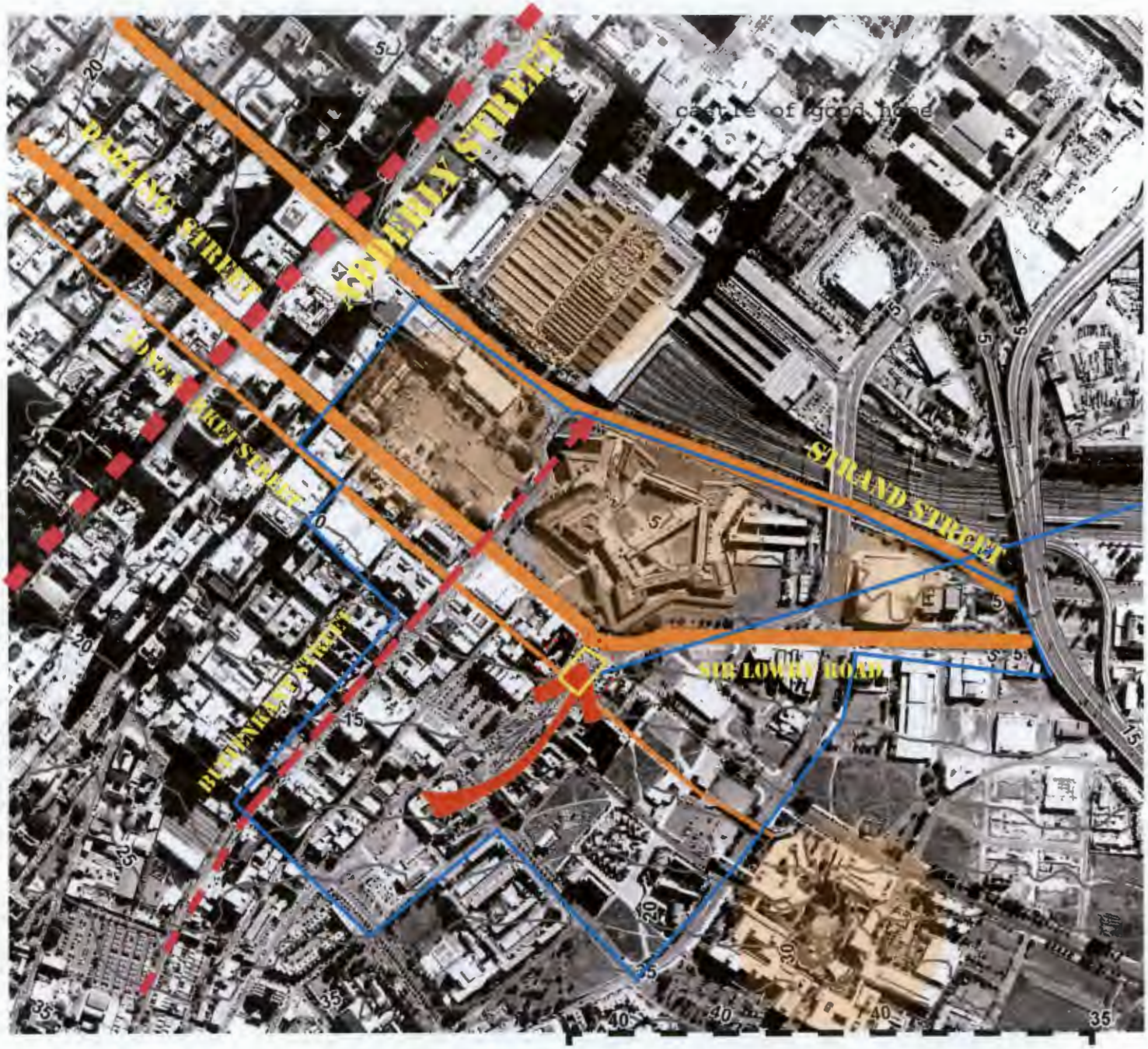

Station
MAIN ROAD
HARNESSING
CPUT

UNPACKING THE SITE

LOCATION OF AN INNOVATION PRECINCT

The following maps show a close up of the area that contains the site for the proposed creative workspace building. The key major facilities and partners in the area include: The City Library (Drill Hall), The College of Cape Town, City Hall, Castle, Good Hope Centre, Woolworths, CCDI, Cape Town Fashion Council, the District Six Museum, CPUT, the Granary, Grand Parade, the Cape Town Station and Woodheads. The area proposed for development as the core of the design hub is a smaller segment of the area. More especially the area bound between Buitenkant to Primrose and Darling to Barrack Streets. This is an area which has significant number of creative industries as this map below.

Key entities in this area include fashion related groups including a number of CMT. While this is only a portion of creative industries in the city (and the area) - the bulk are in the central city area - there is a definite shift eastwards of creative industries as they search for cheaper rentals.

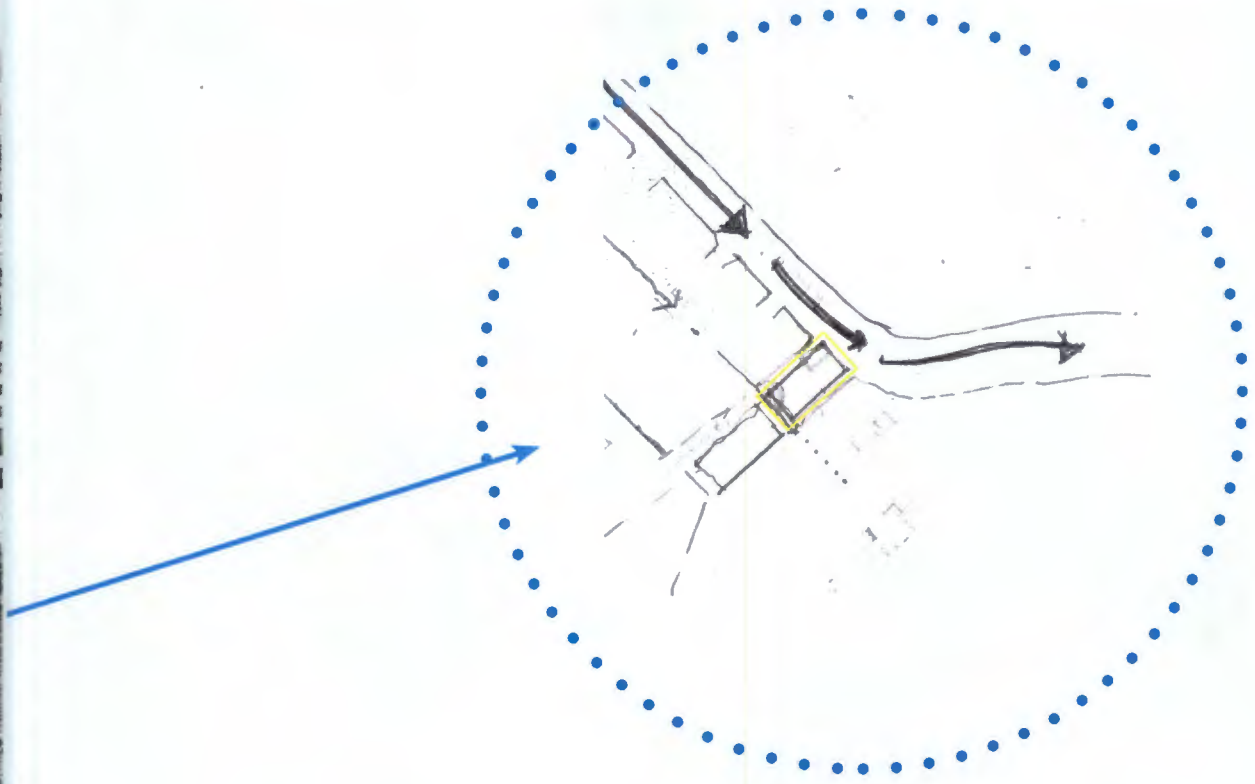


EAST CITY DESIGN INNITIATIVE BOUNDARY

EAST CITY PRECINCT INNOVATION HUB_ DEVELOPING A VIBRANT CREATIVE MILEAU

THE EAST CITY

The East City is the area east of Adderley Street. The Central City Improvement District boundary runs from Adderley to Canterbury and goes up to Spin and Roeland Street. It is an area that has extensive government owned buildings with many being used for government services or for cultural ends. The area contains important heritage spaces including The Castle, Drill Hall, Granary and The City Hall. It also contains a few public spaces including the heritage significant Grand Parade, Church



N

Square and Harrington Square. Because of its strategic relationship with public transport - train, bus and minibus taxi, the space is a busy transport node and the Grand Parade connection with the station attracts some of the highest movements of pedestrians in the city. However, for historical reasons, most footfall tends to move west towards the predominantly commercial side of the old city and to the Foreshore. Because of the predominance of government owned land in the East City which has in a number of cases not been well developed or optimally used, and because public space has been, in the whole, neglected in the area, there has not been much private sector development in the area. In addition the District Six redevelopment process which should have seen more than 20 000 people move into the area and significantly boosted the economy and vibrancy of the central city and the East City, has been stalled by political and logistical problems.

Plans to establish a parliamentary precinct in the area with housing for parliamentarians enabling them to walk to parliament (and now aborted plans for a banqueting hall and parking) have the potential to reshape the area as a vitally. There is currently a review of provincially owned land in the entire central city area which is bound to have implications for the ECDI. There have been numerous moves to reinvent the East City area stretching back more than two decades. Most recently the East City Development Conference 2004 started a process to reinvent the area, however while major ideas stalled , the area has seen some changes. The redevelopment of Church Square in 2006/7 was one project that came out of the process. Even more recently the World Cup 2010 has provided the impetus for a set of redevelopments including the upgrade of the Cape Town Station and the Grand
Parade revitalization process.


STATION
S
HIGH PEDESTRIAN TRAFFIC
ONG MARKET STREET
P
H
L
WOOLWORTHS
CAPE COLLEGE
HARRINGTON SQUARE
CPUT
CPUT.

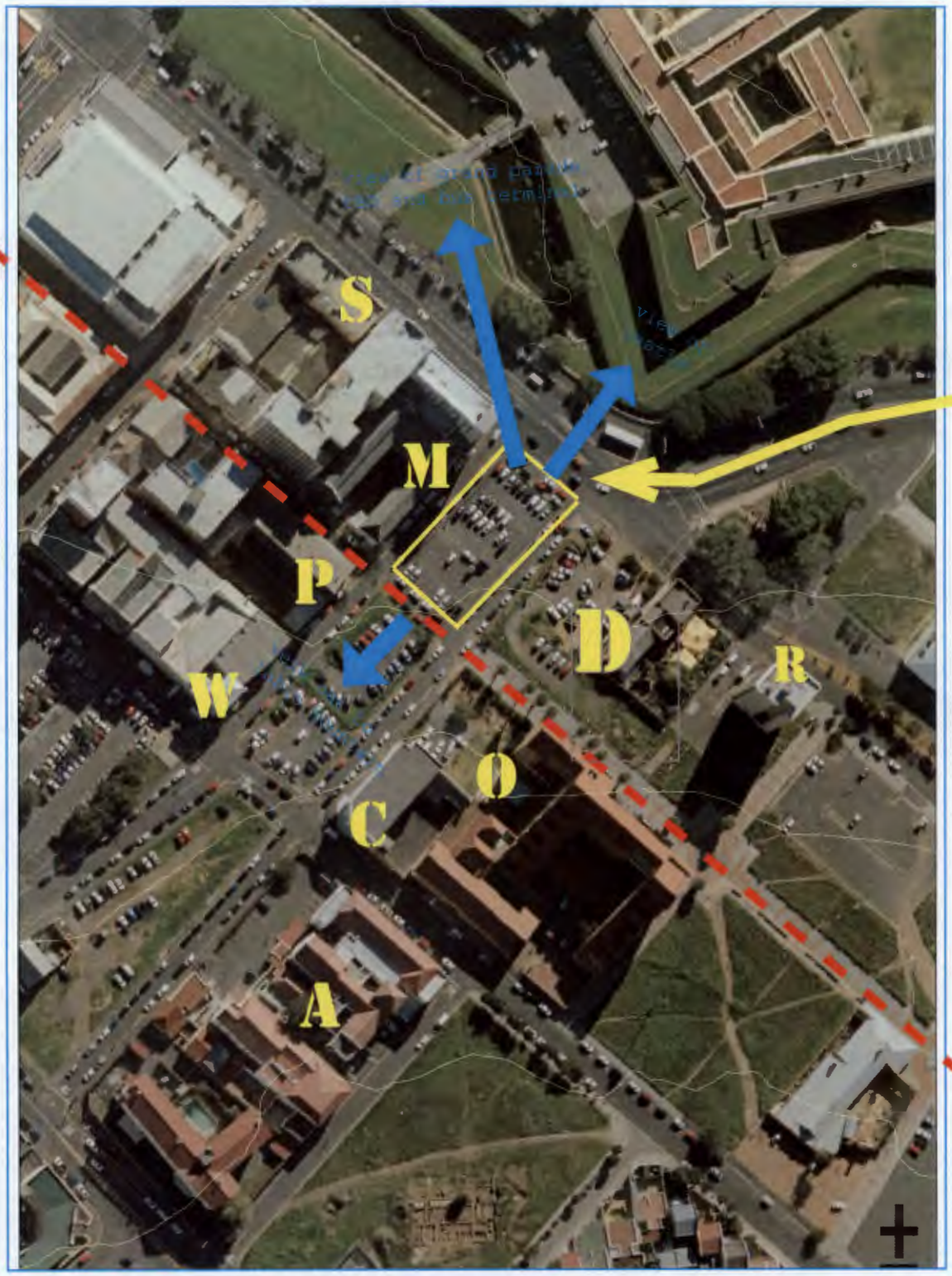
CESS ROUTES

SIR LOWRY

CCING
SS ROUTES

N

SURROUNDING BUILDINGS



O old age home

C Dept. of Cultural affairs

R unused residential block

D District six cafe which recently opend again for the world cup

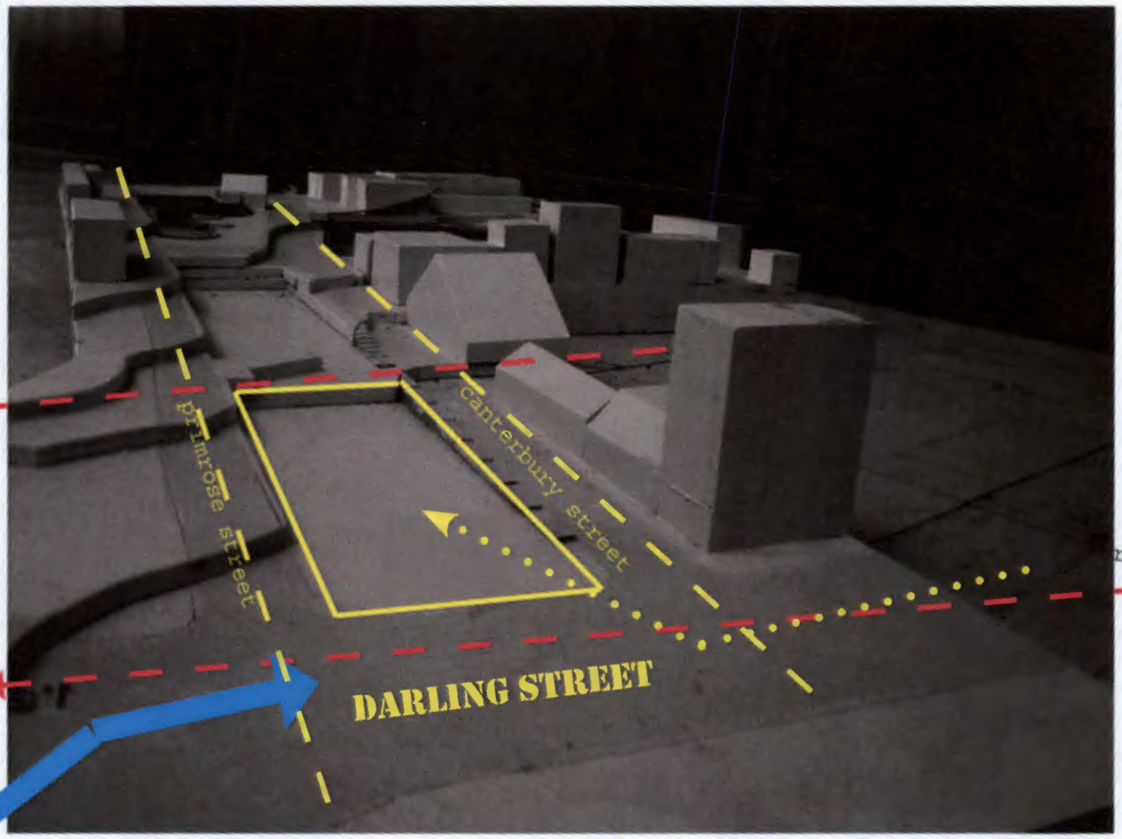
W Woodheads

A Artscape wardrobe department

Mill house-head office for Sportsman-ware house

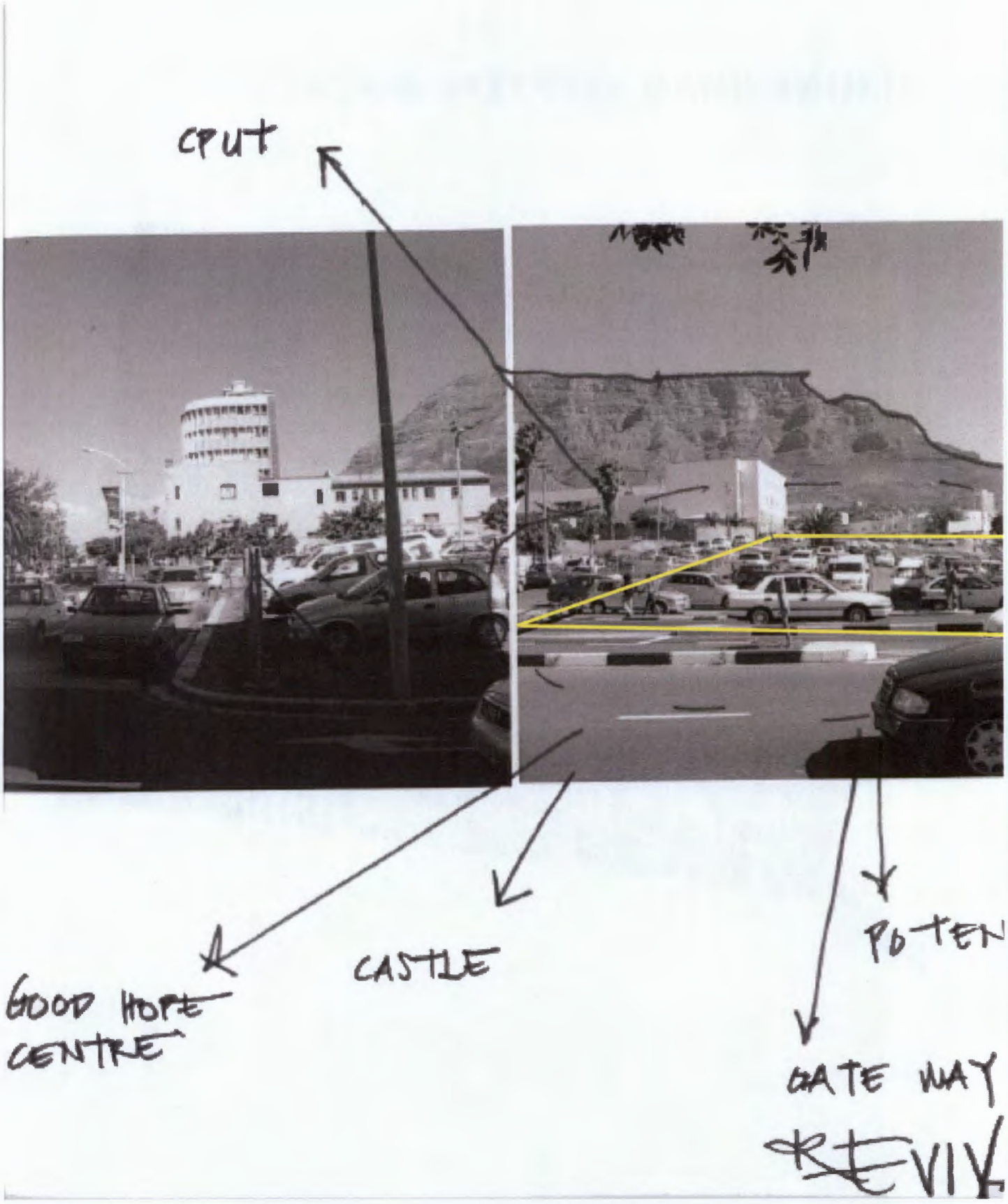
Police Depot

HARNESSING EXISTING ROUTES



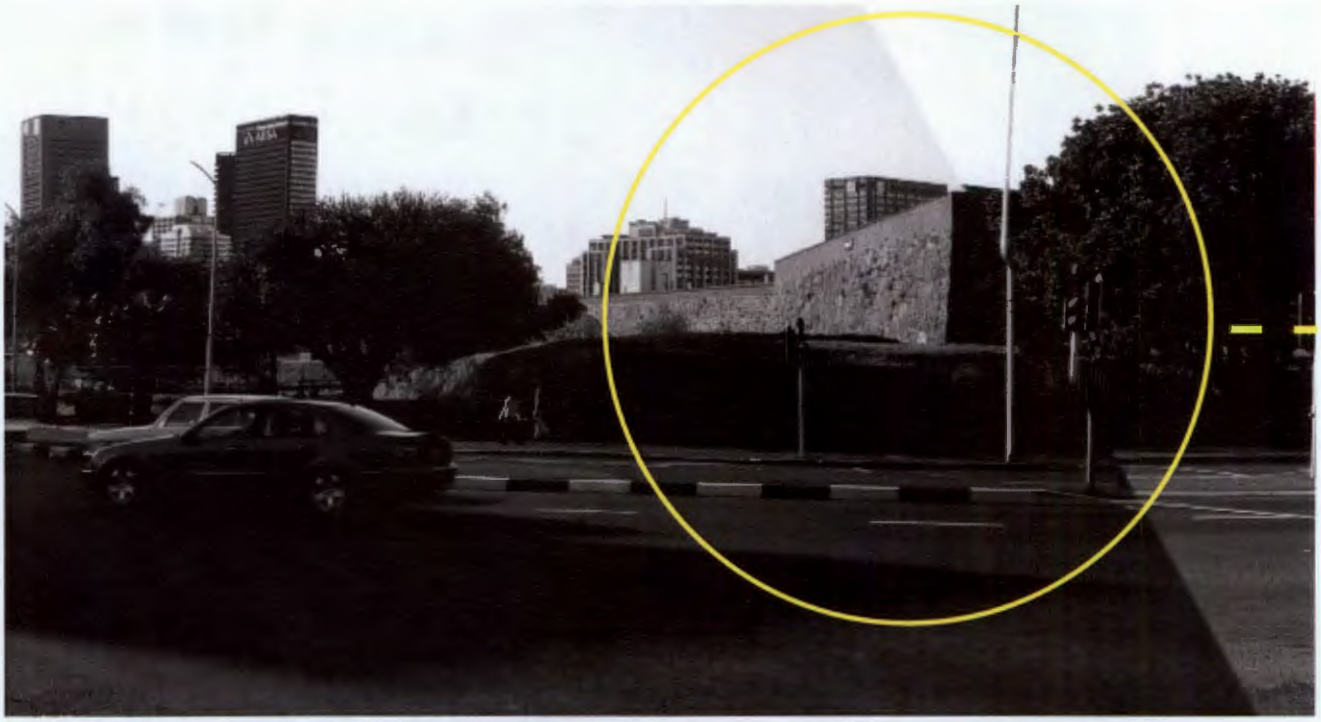
pedestri-
raffic

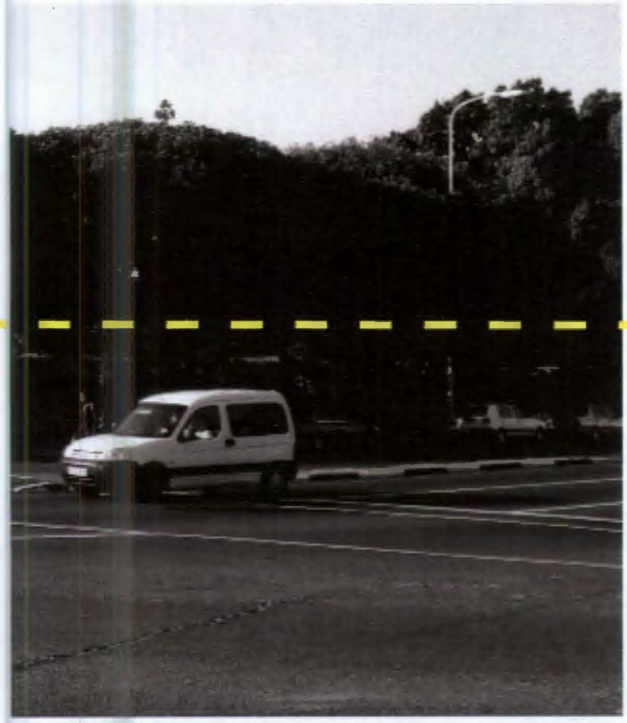
Gate way into city


CPUT
GOOD HOPE CENTRE
CASTLE
POTEN
GATE WAY
REVIV

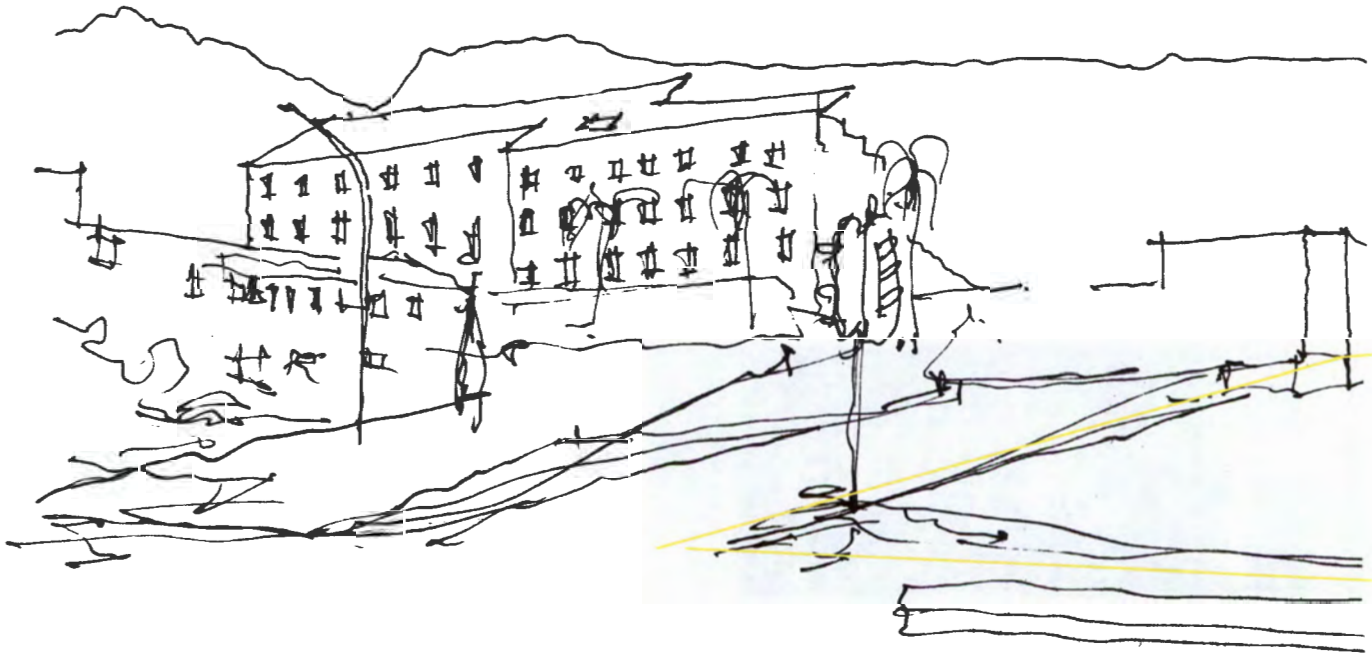

HARRINGTON SQUARE
GOLDEN ARROW BUS TERMINAL
GRAND PARADE
LIBRARY
TOWN HALL
CHRIST EMBASSY CHURC
SITE
P
P

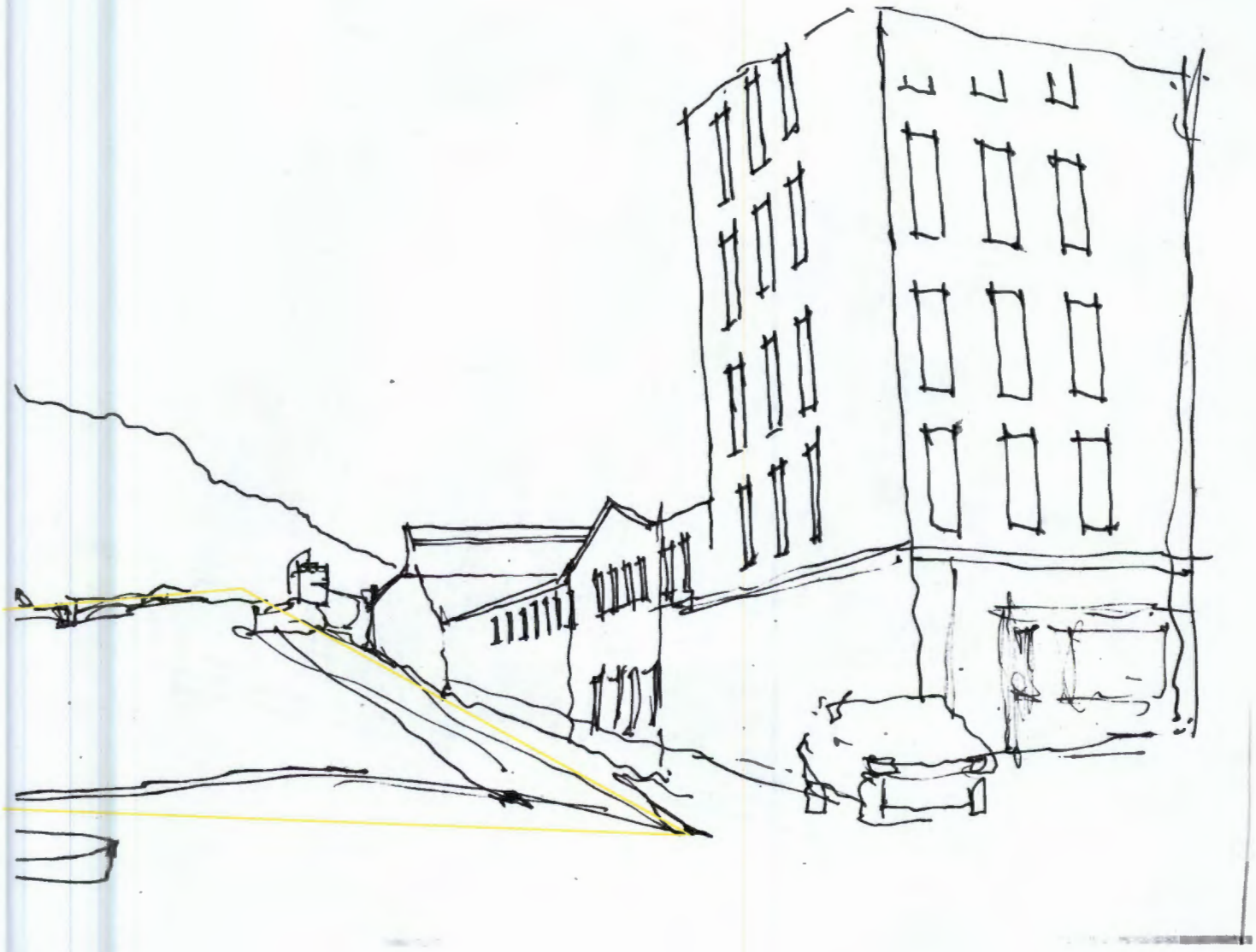
PANAROMIC VEIWS FROM SITE



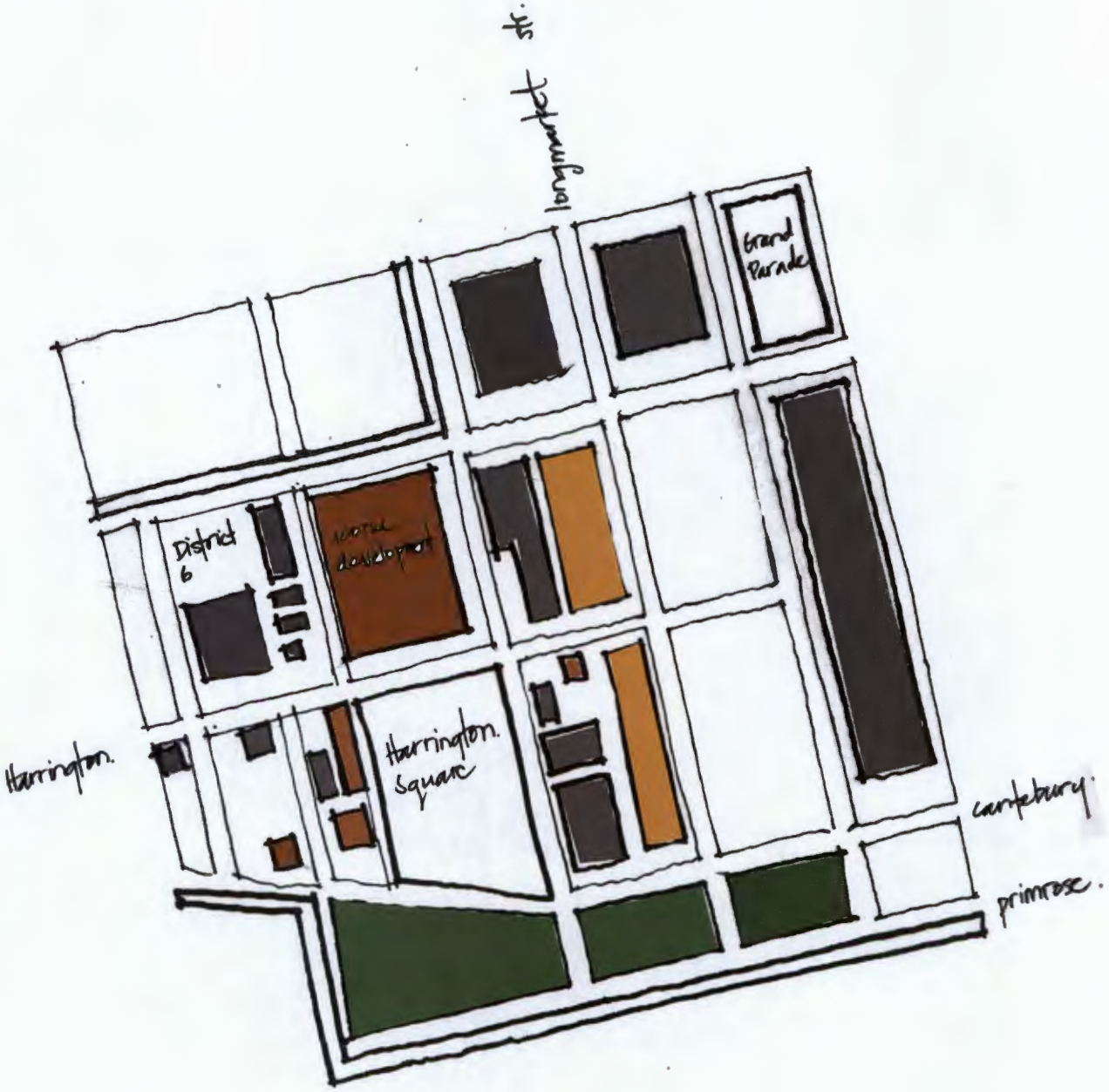


Castle of Good Hope





PROPERTY OWNERSHIP PLAN



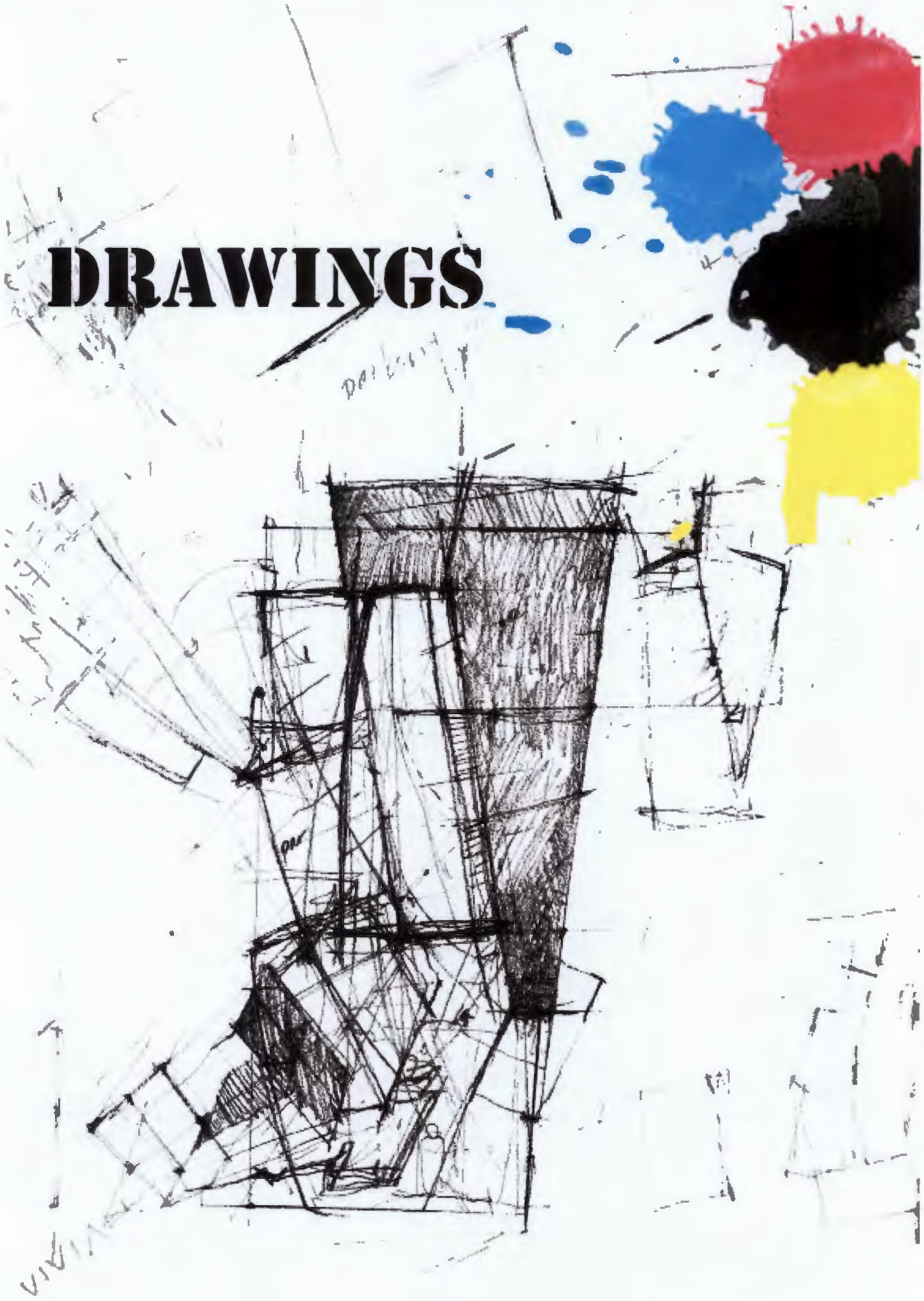
proposed property for purchase

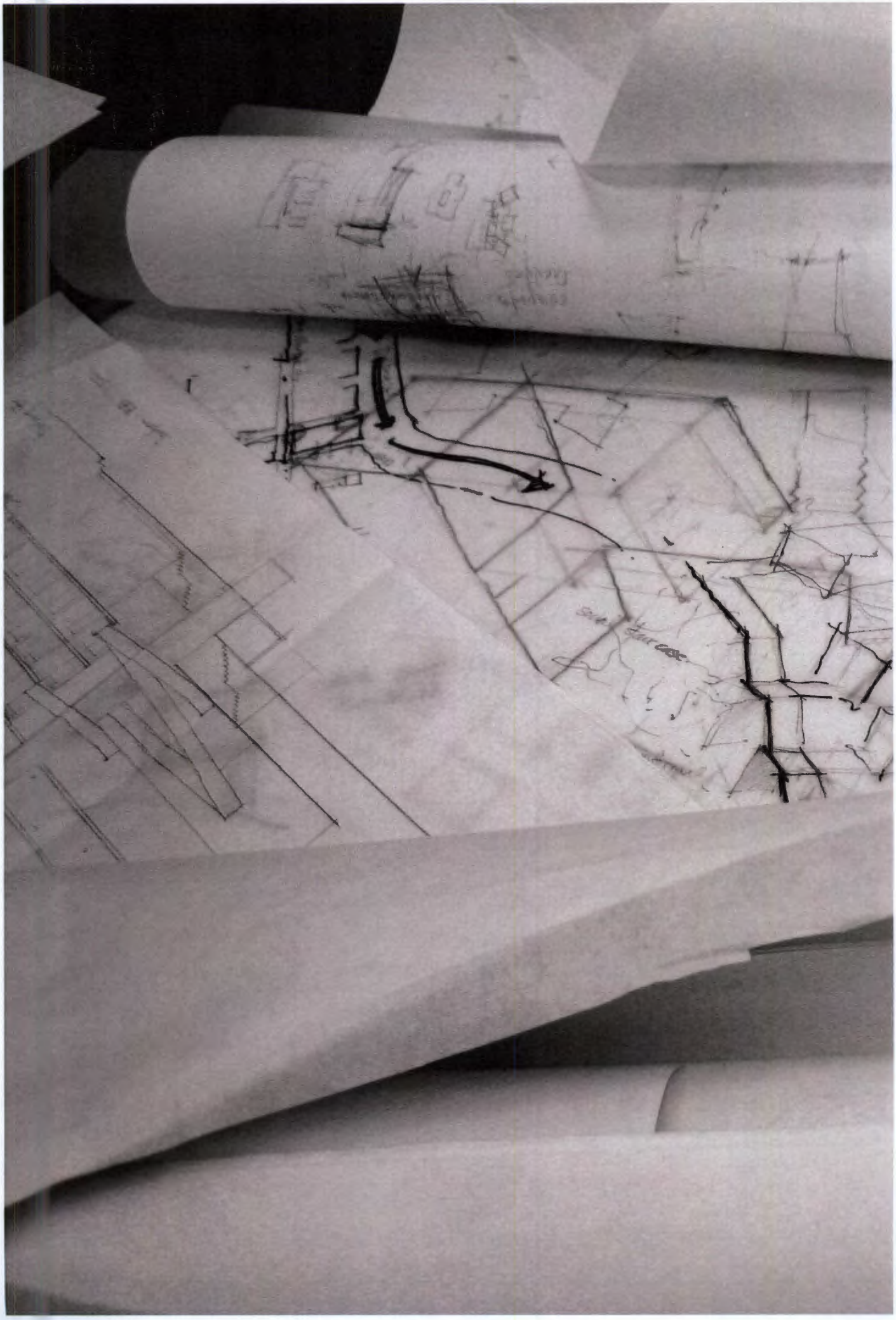
canterbury road reserve

existing creative/ cultural institutions

undeveloped state owned property

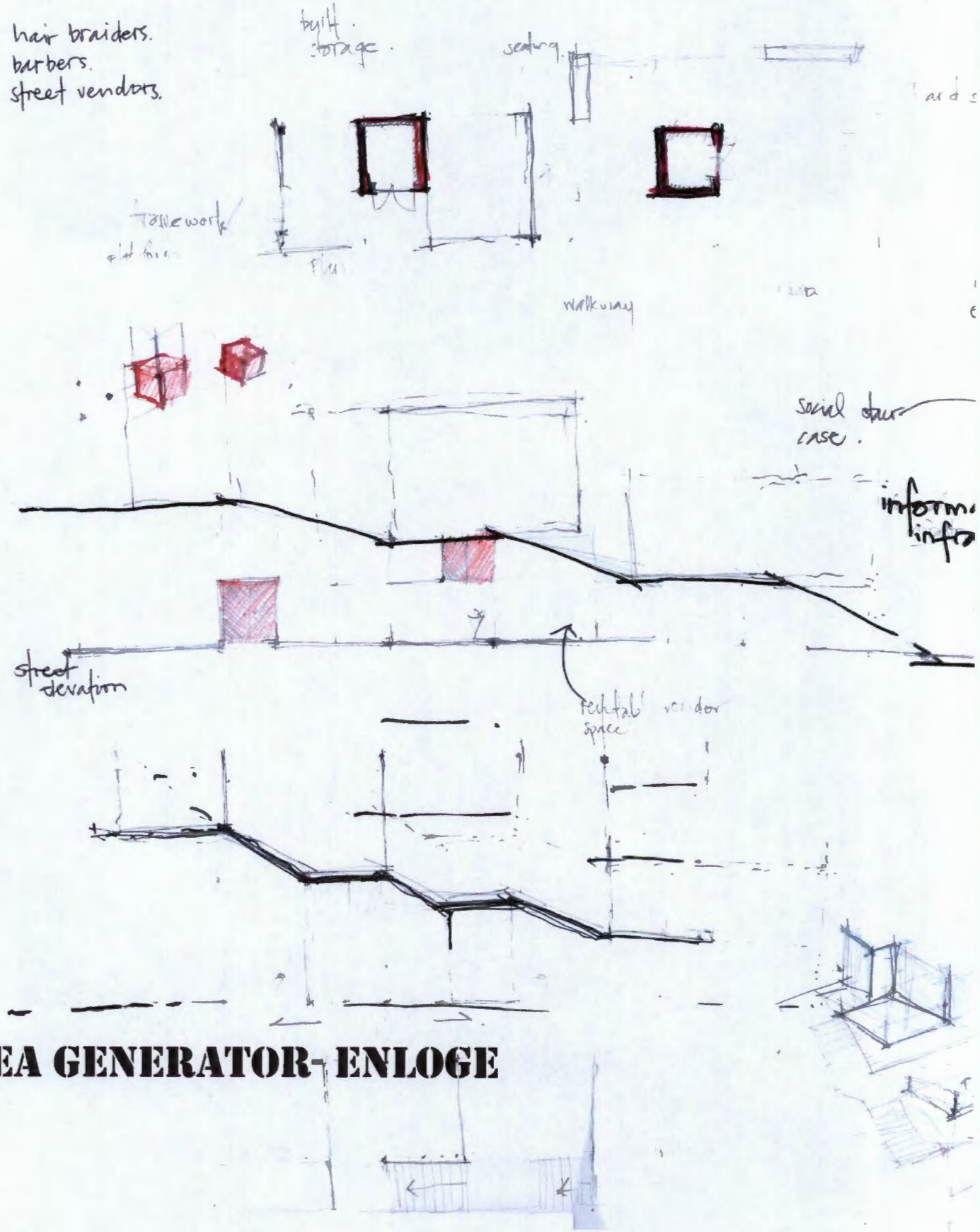
DRAWINGS



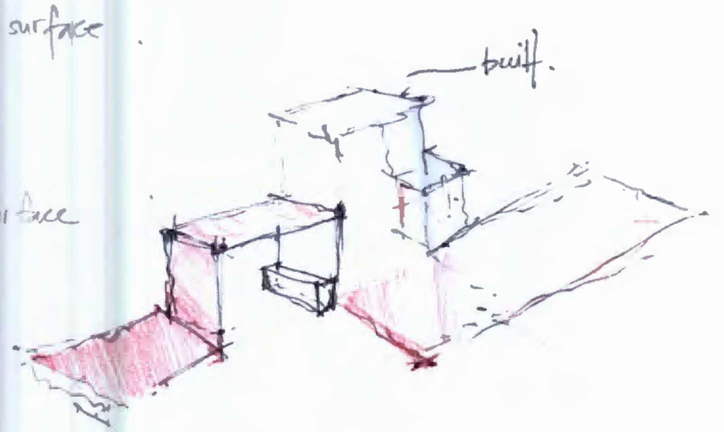


INFORMAL INFRASTRUCTURE. → fixed: circulation, storage, platform / hard

- hair braiders.
- barbers.
- street vendors.



IDEA GENERATOR- ENLOGE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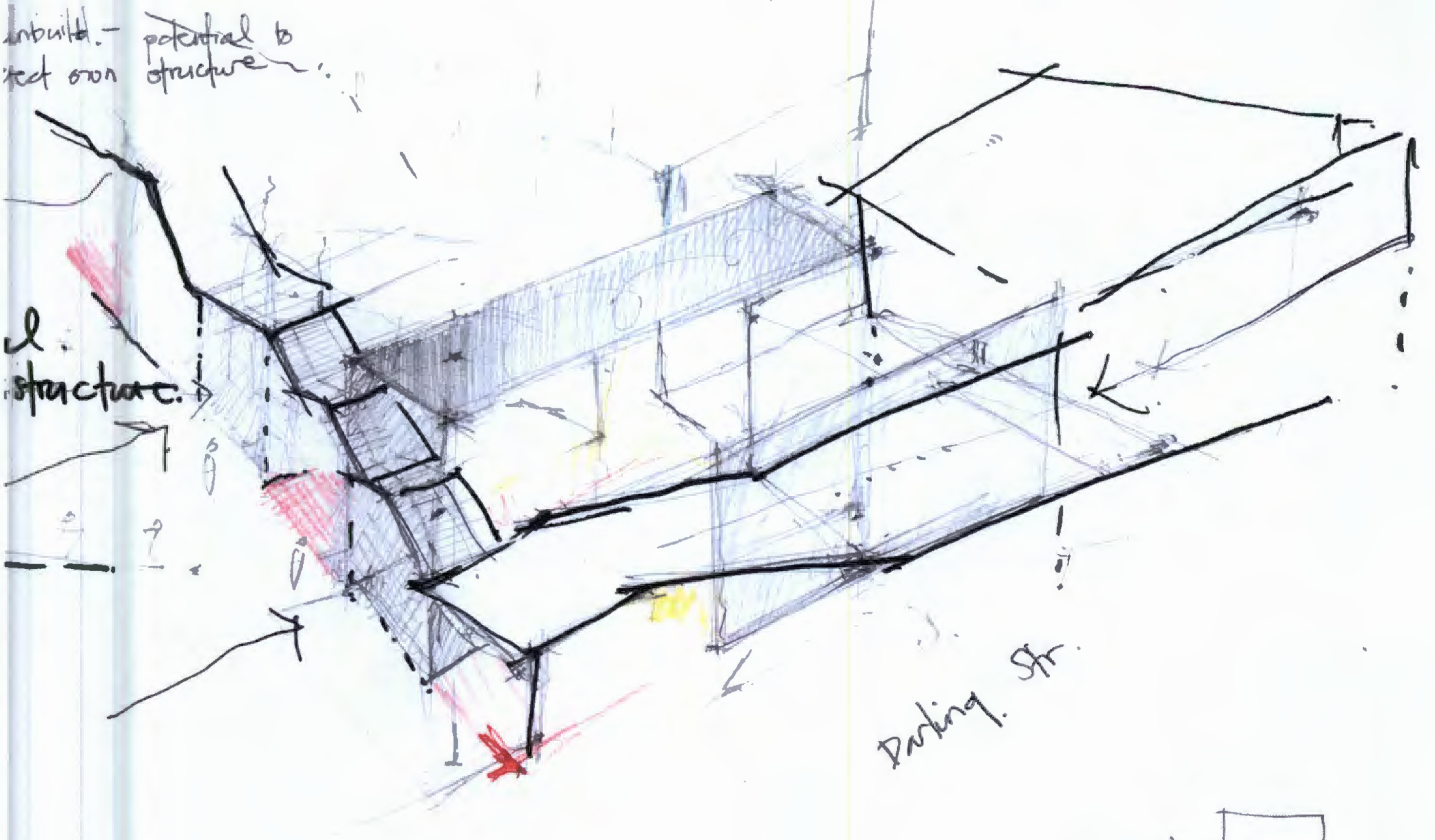
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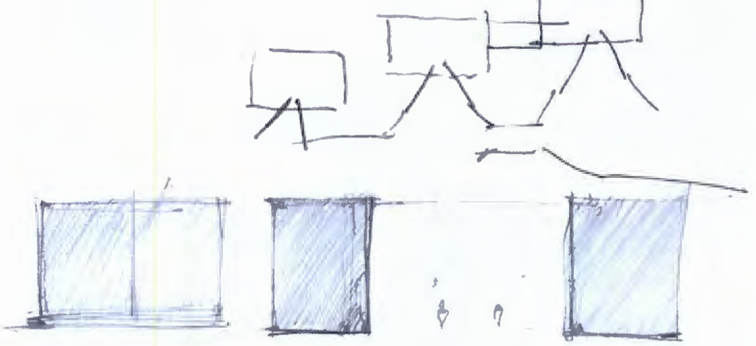
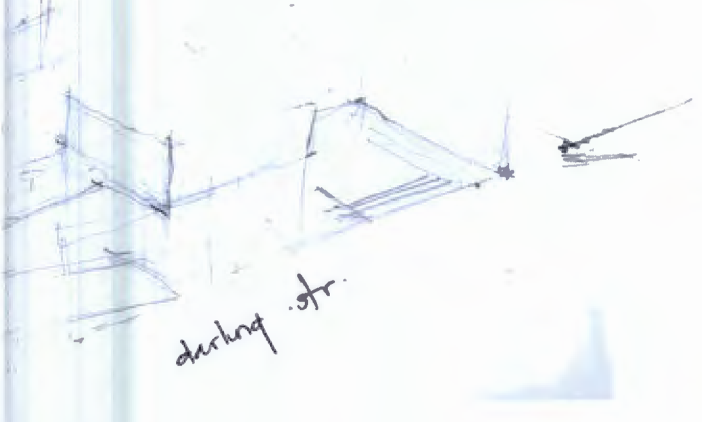
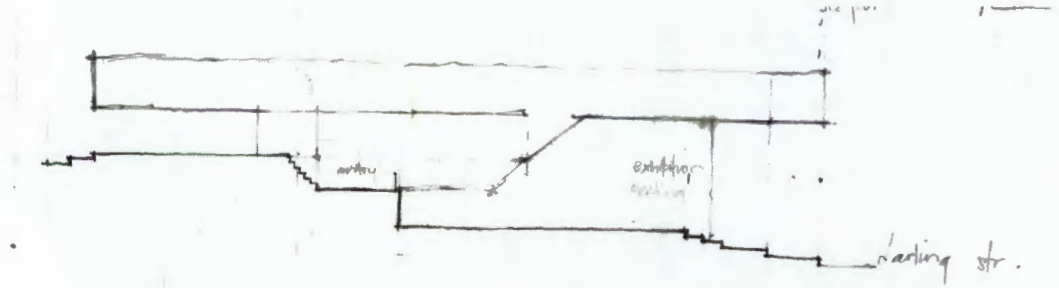
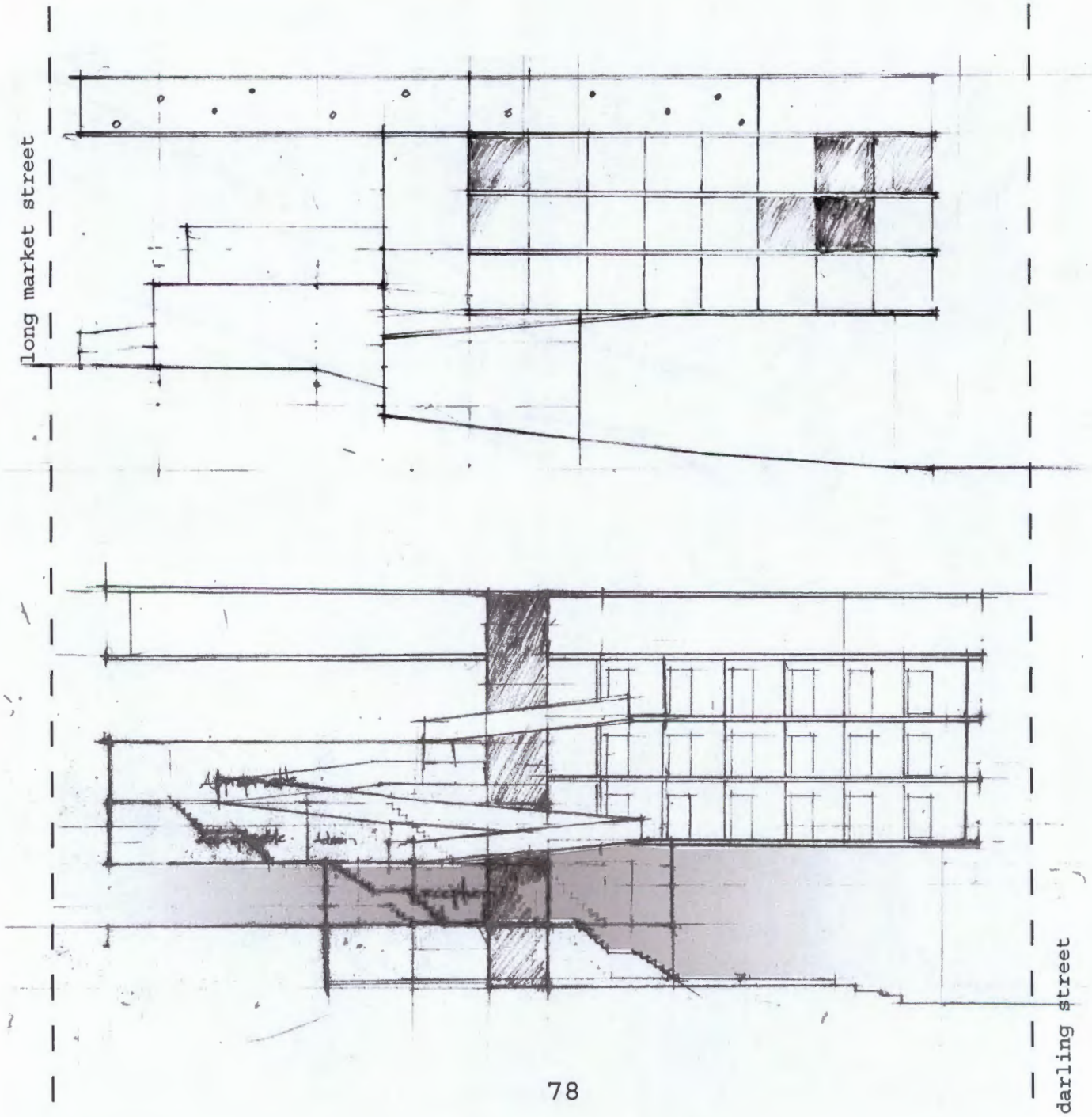



darling .str.

Initial Design ideas



The concept of the building being completely open on the ground floor allowing for users to move freely between the first three floors. The workspaces are located in the hovering box.



DESIGN STRATEGY

1.

The design process was fueled by the ideas of space explored in the theory research document (part 1). The aim was to create a public building that absorbed the city and blurred the boundaries between public and private, creating an undefined zone on the ground plane, a space that belongs to the building and simoultaneously to the city. The site is situated along a relatively high pedestrian route, with students and workers en route to the technikon or work from the station.

2.

The ramp is a pedestrian route that serves to link/ stitch together the public functions of the building i.e the cafe/internet cafe, refresh area and exhibition venue which are located in the first 3 floors of the building. these space are freely accesible by the public.

3.

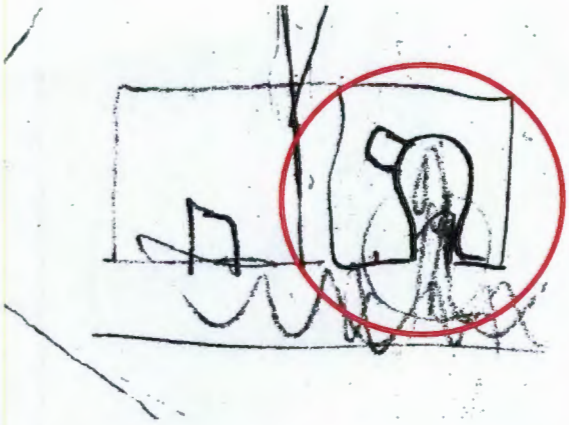
The workspaces consist of 3 types of scenarios: 1. open plan spaces that can be subdivided into smaller zones, single desk spaces for individuals, office/studio spaces that fixed. These spaces feed into social spaces scattered through the building that allow for informal, spontanious meetings and encounters.

4.

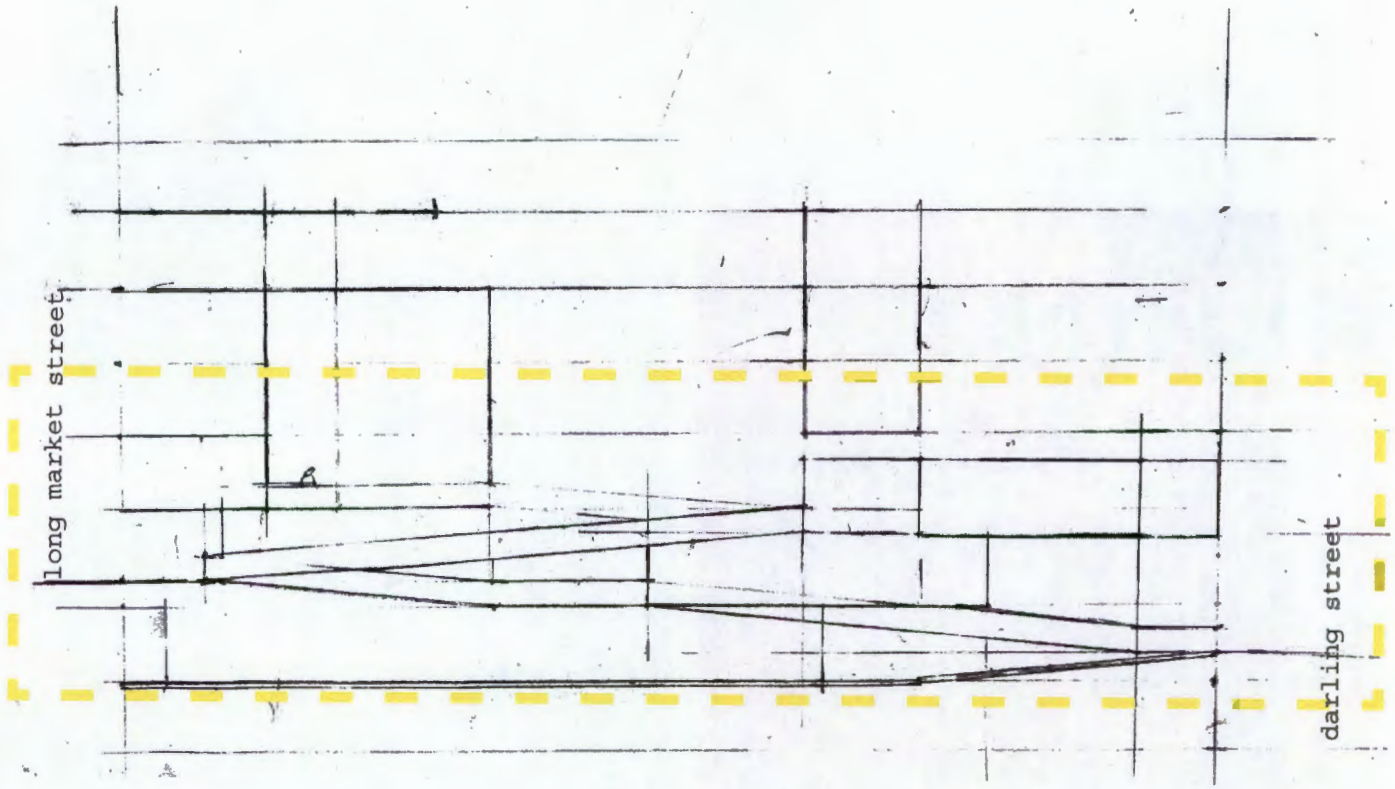
The roof space becomes an open ended zone that allows for events, viewing deck to the city and recreational activites.

5.

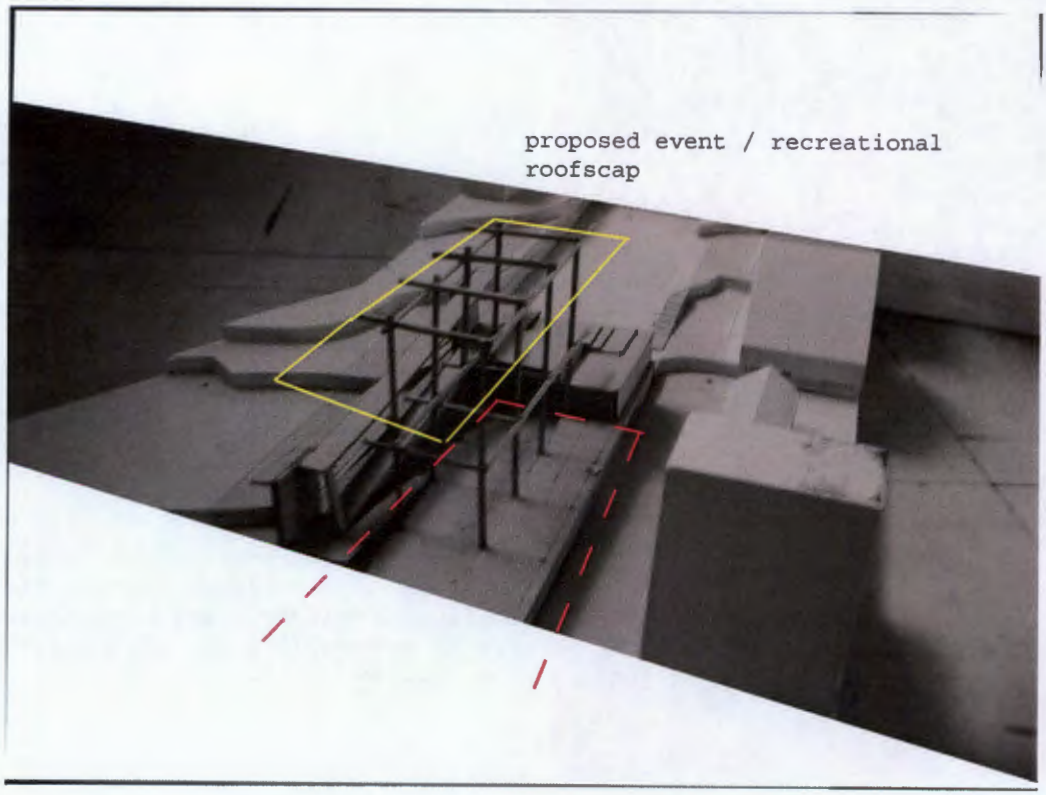
The internal staircase in the workspace zone allows for pause spaces on its landings, again for informal meetings and to serve as pause zones.

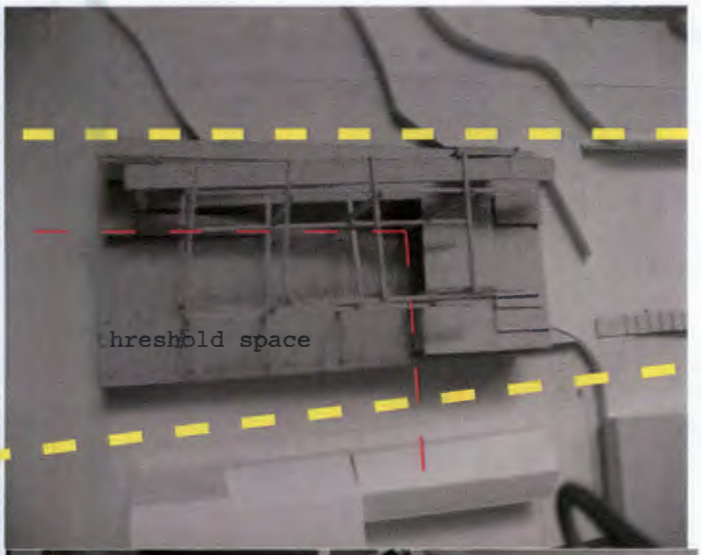


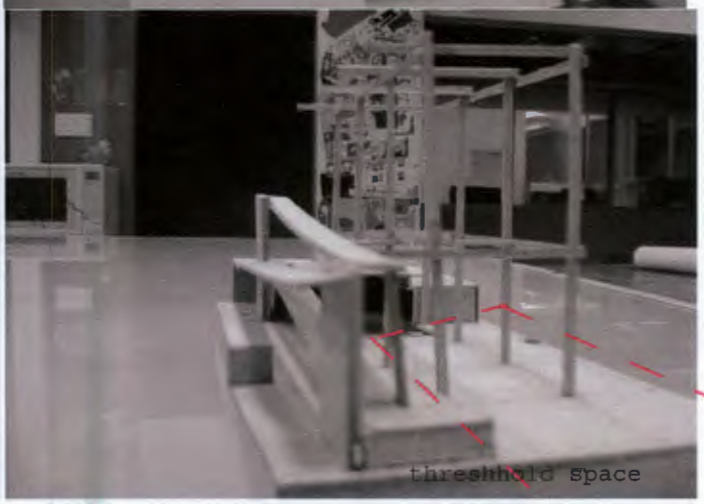
The building entrance situated deep into the building as opposed to right at the front, creating a different codition, that allows users to wwander into the space befor they enter the building

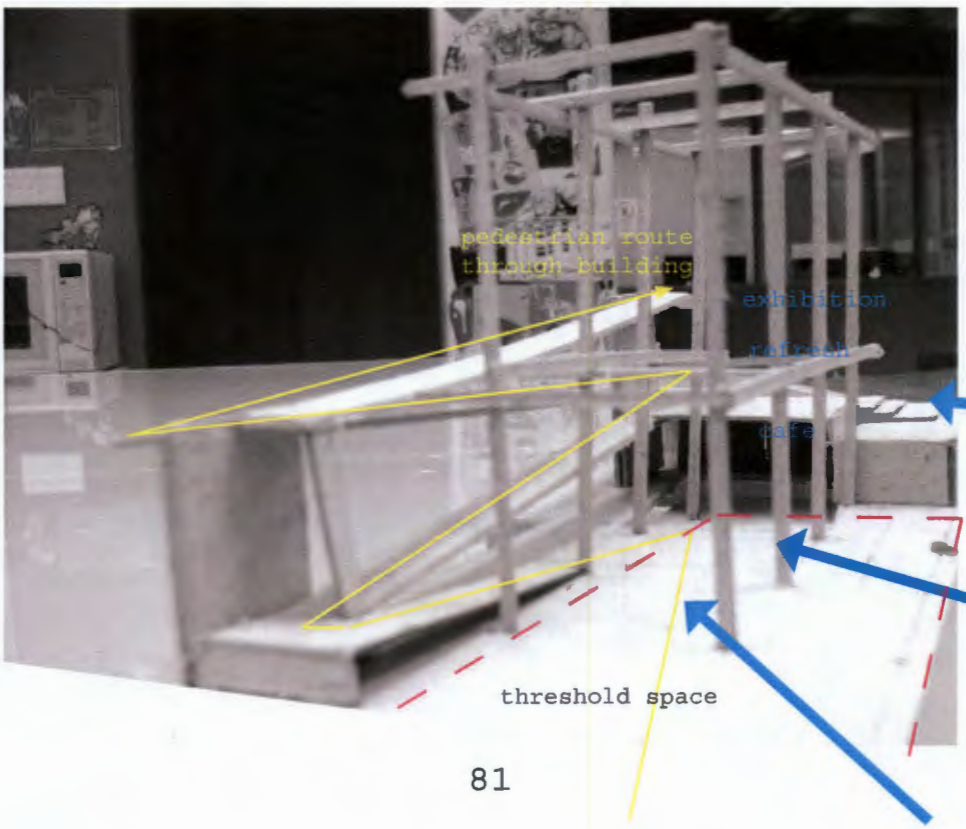


Ramp reduced to serving only public areas of the building




Primrose street
hreshold space


threshhold space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3

TECHNOLOGY EXPLORATION

In addition to the spatial and organisational development of the project I have undertaken a technological study.This section of the document explores the technological aspirations and aesthetic qualities of the project. The concepts of weaving partially informed the design process with regards to the surface articulation of the facades, mainly the north-facing facade of the building. The finished product will comprise of the ideas of weaving and textile in architecture and will serve to enhance the quality of the work environment.


WOVEN.

INTRODUCTION

There is something beautiful about the woven object, it alludes to the careful crafting of detail, the trace of the hand and patience.

My personal interest in the process of the weaving and textiles as a cultural, social, contextual tool has greatly influenced the direction of this paper and rightfully coincides with the recent growing interest and enthusiasm for textiles in architecture. With this in mind I aim to conduct a cross sectional study of the multiple ways in which the two art forms (architecture and textiles) unite to create rich spatial and formal architectural expressions. My fascination with the light, sensual, textured, phenomenological, expressive qualities of textiles, but also the crafting process of weaving, is what I wish to bring to light in my exploration.

The investigation is an application of textile techniques with non textiles and the general hybridization of architecture and textiles, together with the generative sets of concepts, forms, patterns, materials, processes, technologies and practices that are driving this cross fertilization in architectural design. This influence of textiles in architecture challenges traditional perceptions and practices in interior, architectural, urban, landscape and fashion design, and provides an interweaving of new and exciting designs and speculative projects for the future.

This section will also take a look at the historical background of the two disciplines, how the origins of weaving in both disciplines can be traced back to the same starting point, their etymological links, the processes they share and their mutations conceptually and physically. I will also explore materiality and how this affects the process, but also new woven materials, and new processes through weaving that are emerging.

Fig 24: Weaver: (resourse coutersy of Adiron dack-www.adirondackgallery.com accessed 22 May 2010)

"Textiles and Architecture can truly become one."

The premise of this technology exploration is to identify and explore the way in which the two disciplines: textiles and architecture share ideas about construction, form and space most specifically through the process of weaving, It is also concerned with the uncovering of the structural, symbolical and cultural connections between the two art forms, acknowledging that although at the first they seem to exist parallel to each other, they however converge and mutate at some point, so that a distinction between the two is no longer easily recognizable, the point at which architecture becomes becomes textile and textiles become architecture is blurred.

WEAVING AND TEXTILE

Weaving has often been used as an analogy and metaphor to describe various systems and processes. To describes our culture, the natural world, and in sociology. It is also an apt analogy for the urban fabric with its interweaving of people, neighbourhoods, work places and institutions. But at the same time it also describes the generalist role of architects as weavers of the multi-disciplinary knowledge required for the design and production of a building. "It is a construct and a craft that can purposefully and aesthetically order building systems" (Kieran and Timberlake 2003, 35)

The process of weaving can be expressed in the way components in a building are connected-joints, to the articulation of surface, serving to enhance the pleasure and meaning in the building, reflecting on the particular context and climate, but also making reference to culture. This approach to making is a about a process of discovery and not preconceived ideal. It is a search for an appropriate response and resolution that reflects on the situation at hand. Like the work of Sergison Bates, the aim is to seek an authenticity in construction where the nature and intensity of material is expressed directly with rigor.

(Kieran and Timberlake 2003, 36) also go on to emphasize that:

the link between the two forms of art: Weaving (textiles) and Architecture conceptually and physically stems from their common need to relate a design's physical properties to its aesthetic implications, weaving and architecture share a common trait worthy of further exploration. In its ancient usage, weaving creates surfaces and volumes by the regular interlacing of pliable strands. The woven textile cannot ever be completely closed it always has space between its strands. "While the woven surface separates and contains, it breathes and connects, it is a screen that is once space and surface. Never quite a membrane, but part joint, part surface, part volume, part system. (Castle 2006, 4). Weaving is unique in being simultaneously open and closed. Together with this, the flexibility of weaving provides for the separation and the differential removal and replacement of elements in a system.

Fig 24: The ornamental destiny of the twisted surface begins the process of superposition of form and structure. Ornament emerges within structure...." Serero architects (resource: serero.com accessed 12 May 2010)

The varying degree of permeability of the weaving speaks of density, texture and transparency of the woven fibre. Weaving allows the transparency of the fibre to be controlled.

I believe that the articulation and expression in form through weaving can be a rich and complex one that is worthy of further exploration and application in South African Architecture. The inherent woven nature of structures can be utilized as an informant for architectural design. "Part surface, part joint, weaving is essentially a system of continuous links, a technique that can integrate a number of operating systems into a single structure." (Quinn 2006, 24). Weaving is about the similarities and overlapping concepts that exist between textiles and architecture, realizing that this relationship when extended to design and in practice, maybe better able "to respond to societies fast changing cultural and consumer demands, but also keep up with global technological advancement in materials, enabling the production of more dynamic, flexible, interactive, event and process based spaces". (Castle 2002, 5). Thus form and space through the relationship between architecture and textiles maybe transformed into a richly expressive language through which experience and meaning are communicated.

Fig 26:Spider webs are beautiful and this spider has woven this one for survival (resource: tessaharris.wordpress.com accessed 14 April 2010)

Fig 27: Weaver bird weaving (Resource: Walter Kitundu at apps.exploratorium.edu/kitundu/images accessed 14 April 2010)

WEAVING

The subject of weaving in textiles and architecture is very broad. My aim is to located it soley in Architecture. Although weaving first appears in nature, man has adopted this technique of making- from making of ornaments, utalitarian objects, to architecture.

Weaving often refers to the process of making a textile, but it can also apply to the making of architecture. Weaving raises aesthetic, social and cultural issues that may provoke more complex, sophisticated critiques and discourses within architecture.

"Textile ways of thinking and doing architecture, architectural ways of thinking and doing textiles".

Weaving in African architecture:
traditional Zulu Hut

Fig 28,29,30: Framework of a zulu hut, construction (resourceAppears in collections NJ van Warmedo photographs & Woven Zulu hut thebesttimeoftheday.blogspot.com accessed 14 May 2010)

Weaving is also deeply rooted in African culture, examples of weaving architecture can be seen in examples such as the traditional Zulu hut, where the women would cover the frame of the hut with matting, which is woven from thatching grass and binding it with a web of grass ropes.

WEAVING AS PROCESS

Weaving is the textile art in which two distinct sets of yarns or threads, called the warp and the filling or weft, are interlaced with each other to form a fabric/ textile. In its ancient usage, weaving creates surfaces and volumes by the regular interlacing of pliable strands- the warp and the passing over and under each other at right angles. The warp threads run lengthways of the piece of cloth, and the weft runs across from side to side (Wikipedia the free encyclopedia). Weaving in essence is a continuous joint. The building block or cell of a woven surface is the joint between overlapping materials.

As Anni Albers, a weaver from the Bauhaus and considered the most innovative and influential textile designer of the 20th century., revealingly states:

"Surface quality of material, that is matière, being mainly a quality of appearance, is an aesthetic quality and therefore a medium of the artist; while quality of inner structure is, above all, a matter of function and therefore the concern of the scientist and engineer. Sometimes material surface together with material structure are the main components of a work; in textile works for instance, specifically in weavings or, on another scale, in works of architecture"

This statement exemplifies the aesthetic and functional purpose of weaving, not only of textiles but of architecture just the same. Both surface and structure are integral in the purpose and beauty realisation of a woven structure. Architects can take clues from weaving, taking into account that the structural materiality, functionality and aesthetic qualities are equally important.

"Weavers are, by nature, organizers; the craft demands attention to detail, an ability to see patterns, and deferment of gratification until a rigidly defined series of small actions add up to a whole greater than the sum of its parts." (Alvic 2003, 146). This is the same for architecture, for architects, we are synthesizer, working in a complex processes, both abstract and physical in an attempt to create a harmonious whole, a combination of elements in a coherent whole, where ultimately beauty and utility come together.

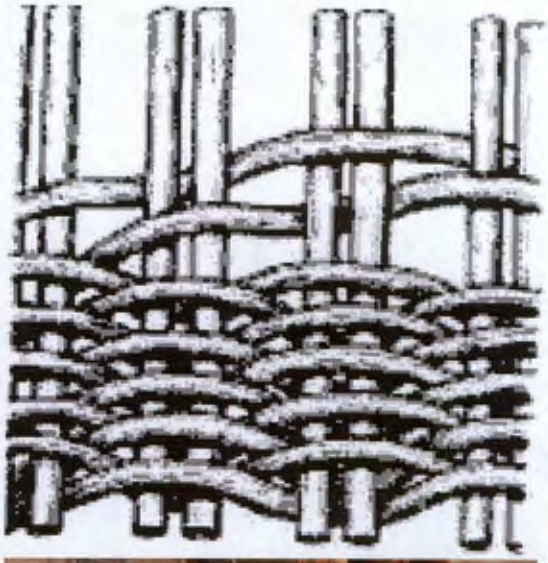

Fig 31, 32, 33: Carpet weaver in Mumcular Congolese women practicing lava basket weaving (resource courtesy of www.travel-blog.org accessed 10 April 2010)

According to Semper the woven wall was the original technique of making architecture. In the article "textile Tectonics" -an interview with Lars Spuybroek in Architecture Digest: he explains thatSemper is famous for Stoffwechselthese, the transformation of materials, which means buildings aren't made of textiles anymore, but the that textile has been transmaterialised into stone and steel and other constituent parts. So that, it is not so much ideas that inhibit matter, but other materials - Textile inhabiting stone. It is an abstract materialism, saving us from idealism and realism at the same time. Semper was very conscious of this; he wanted to steer in between "speculative aesthetics" and "mere engineering". Stoffwechsel is a german word for metabolism. Literally it means "change of substance" and even more literally, "change of fabric"! in Semper's theory textile drives everything, it's the main productive element, the main agent of architectural form.

In his book "The Four elements of Architecture" Gottfried Semper makes reference to Architecture's distinct four elements that can be found in the traditional crafts of ancient Barbarians:

The hearth- ceramics
The frame - carpentry
Terrace- stone masonary

[Enclosure- weaving]

"A way of ordering built forms, like the Greek- earth, water, air and fire, the constituent elements that make up all other materials and life forms". (Spuybroek 2006, 53)

Enclosures (walls) were seen to have their origins in weaving. Just as fences and pens were woven sticks. The most basic form of a spatial divider in use in parts of the world today is the fabric screen. It is essential to take note that only when additional functional requirements are placed on the enclosure (such as structural weight bearing needs) does the materiality of the wall change to something that requires it to move beyond fabric. To something that is more solid and less permeable. However the solid wall can be considered a form of weaving, if the concept of weaving is extended. In the basic construction of a wall. The various bonds, the units in a wall are nothing but a microscopic structure of a fabric.

(Malgrave & Herman 1989, 69) expand on the idea of Semper's redefinition of the wall as a spatial enclosure, or wand, rather than as a structural and critical tectonic member. Semper further refers to a building's envelope as an example of 'clothing' and found a common etymological root to the German words for dress and wall. Likening textiles to built surfaces he described both as types of "veiling". For him it was the hanging wall, carpets and their status as non structural spatial dividers that made them 'the true walls, the visible boundaries of space'

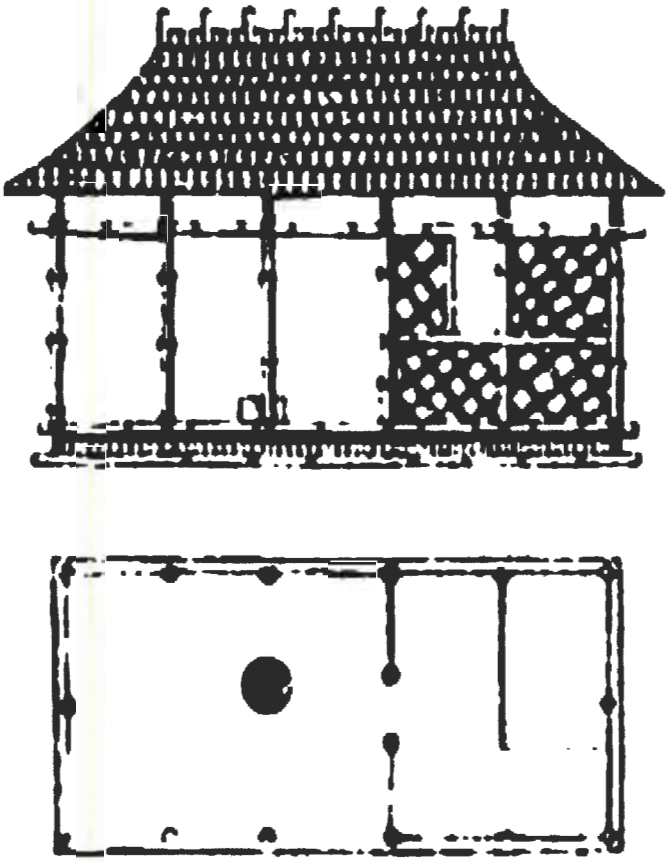

Fig 34: The Indian hut from Trinidad on display at the great exhibition. The basic textile construction, representing the 4 elements of architecture(www.arch.mcgill.ca accessed 14 May 2010)

THE ETYMOLOGICAL LINKS AND CONCEPTUAL OVERLAPS

between Architecture, Textile and weaving

(Castle 2006:5) in her introduction to the theme - Architextiles makes reference to the explicit etymological links between Architecture and textiles. It is interesting to see how the two: Architecture and textiles are very closely linked both linguistically and conceptually. The following is a brief look into the derivatives of the words textile, fabric and architecture, but also familiar jargon used in architecture that is rooted in textiles, to expose the overlaps between the two..

It is evident that although physically these art forms differ with regards perhaps to scale, function and application, they are governed by the same intrinsic principles and share common qualities that force them into a relationship that is so intertwined and inseparable.

Textile, technology, text, texture, connection and context:

These words are all derivatives of the same proto-indo-European word tek, which is the root of "architecture".

Technology and textile are also both derived from the Latin word texere meaning to weave, connect and/or construct.
Tectonic: The word is derived from the Greek word tekton, meaning carpenter, maker or builder.

Tectonic suggests a preoccupation with materiality and a championing of craft that respect the trace of the hand and the expressive potential of construction. (Lecuyer 2001). Tectonics is both the making of a building and the rationale of its construction. It gives, shape, texture and warmth to architectural space. In his studies in tectonic culture argues that architecture is invariably as much about structure and construction as it is about space and abstraction. This concept focuses on the way a building is made and in what way this making is made visible in the building.

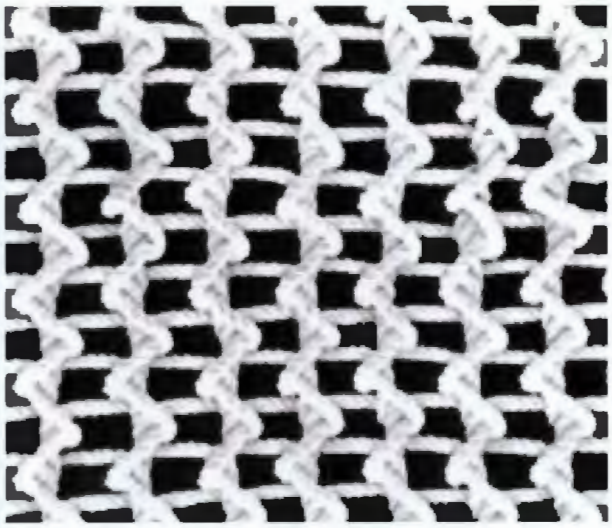

Fig 35; example of Woven textile (resource: http://faculty.philau.edu accessed 29 April 2010)
Fig 36: Ground figure image of the urban fabric of Barcelona
Fig 37: Cape Town (resource: google earth 20 April 2010)

Fabric:
The word has its origins in the Latin fabricare or fabre meaning to work, or to make
It is also interesting that the word architect comes from ancient Greek Arkitektos meaning "a person in charge of weaving"
according to Els Zijlstra, director of Materia, advice bureau for architectural product and material development in Rotterdam.

Through this etymological exploration it is evident that although weaving is most often associated with textiles and fabrics, it is also directly related to architecture.

The other link is the textile terms used in architectural systems: such as
Curtain wall,
'mies invented the glass curtain wall', Shigeru Ban explained,
'but I just used a curtain'.

Ribbon window and sail vault

Urban fabric | urban Texture

2.2.1 (A woven) Urban fabric, relates to the actual physical form of towns and cities, a system of roads, streets, buildings and open spaces.
It is very clear that there are many diverse influences that shape the urban fabric of a given place. At first glance it is the physical objects, such as buildings and streets that is most obvious, but there are also invisible psychological, historical and social factors that are just as important and greatly influence the structure of the urban fabric. Historically Greek city grids were derived from the structure of woven cloth; the tightly woven, right angled patterns of cloth were seen as harmonious. In this sense weaving can also be viewed as an analogy to integrate context, culture and construction accordign to (Griffin 2009)
The urban fabric is also 3dimensional and has texture just like fabric/textile.

PRECEDENT

1.
XVI Chilean Architecture Biennale Pavilion
Santiago, Chileby Felipe Assadi & Francisca Pulido Architects "

2.
The Boiler Suit by Thomas Heatherwick.

3.
Shantou, China headquarters by Hadighi

Fig 38, 39: XVI Chilean Architecture Biennale Pavilion
Santiago, Chileby Felipe Assadi & Francisca Pulido Architects "
(resource: greenbuilding.world-aluminium accessed 22 May 2010)

The woven aluminium façade of the Chilean Pavilion allowed direct access of daylight, air and views from the interior."
The skin of the Pavilion was woven from aluzinc sheet, produced by Hunter Douglas, which allowed light to filter through the building envelope, giving the structure a textile-like quality. Thus the pavilion spoke of radical contemporary architecture yet harked back to the origins of architecture in woven timber structures, as observed by architect Gottfried Semper in his 1851 publication The Four Elements of Architecture. (Griffin 2009)

The material properties influence on weaving.

Aluminium's flexibility and formability guarantee virtually unlimited design potential. It can be shaped, welded, screwed and cut into dynamic 3-D shapes. The extrusion process offers an almost infinite range of forms and sections, allowing designers to integrate numerous functions into single profiles. Rolled products may be manufactured flat, curved, shaped into cassettes or sandwiched with other materials. In addition, aluminium can be sawn, drilled, riveted, screwed, bent, welded and soldered in the workshop or on the building site.
The perforated aluminium strips allow light to filter into the pavilion, providing delight on a very tight budget

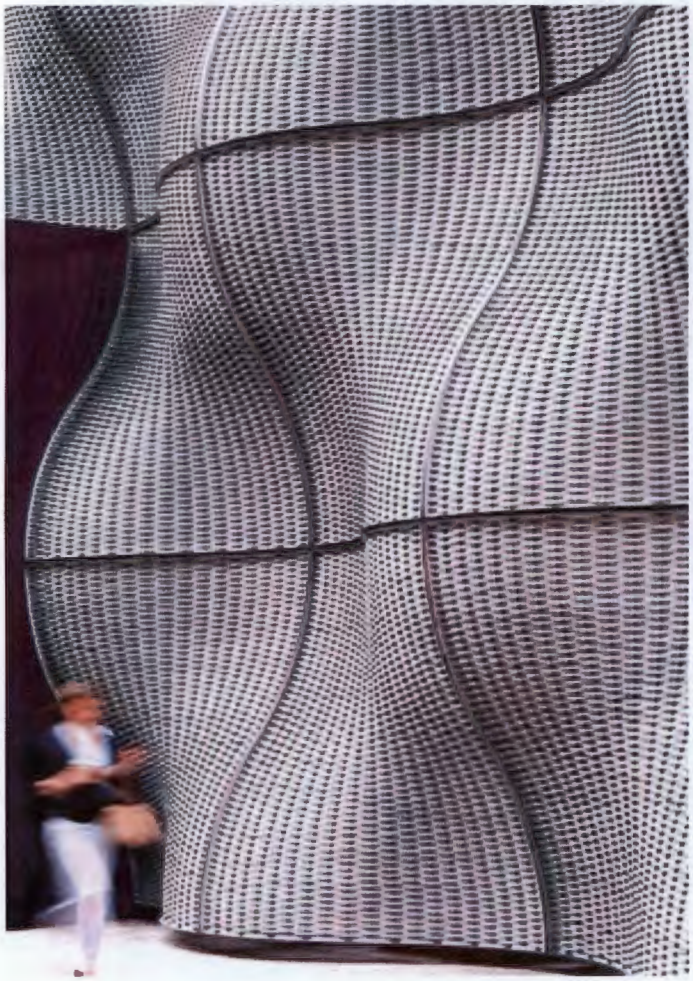

Fig 39 ,40: The Boiler Suit by Thomas Heatherwick. This is an undulating façade of woven steel panels encasing the boiler house at Guy's Hospital in London. (resource: www.dezeen.com accessed 2 May 2010)

Though the original structure was built in 1974, the new "Boiler Suit" consists of a stainless-steel woven braid with 108 custom panels fit together to enclose the boiler house of the hospital. The concrete shell of the building had to be maintained, so two sides were sheathed in 8-ft. (2.6 m.) squares of braid completed in 2007. On each panel two opposite corners buldge out, while the other two are pushed in.

On one side of the new facade, windows were placed to allow the public to view the industrical machinery within, while the other side frames the entrances into the hospital. The braids also help ventilate the equipment, which normally would be accomplished by louvres.

Fig 4.: Hadighi designed a woven concrete facade for the Shantou, China headquarters for Lafayette 148, a New York-based clothing designer and producer. Image courtesy Studio for Architecture. (resource: www.architecture,uark.edu accessed 14 may 2010)
The façade has a textile like quality although a very Architectural material- concrete is employed.

WOVEN ARCHITECTURAL FABRICS

Available Woven materials

The discussion of textiles in Architecture has increased in prominence as the "result of innovations in materials, science and technology, as well as new programmatic requirements and emerging new typologies". (Castle 2006, 13) According to (Quinn 2006, 24) Woven stainless steel: which is preferred to mild steel for its greater durability and resistance to corrosion- in the form of readymade exterior mesh, is aesthetically and structurally compelling textile. Woven materials encapsulate several industrial processes, but also require the intervention of skilled weavers. Techniques such as knitting and crochet can contribute to the process. When flexible fibres and supple polymer strands are twisted or bundled into cables and braided, the structures that result can create tension and compression more efficiently than masonry.

Textiles have emerged as a material that can interface with built structures on many levels, resulting in a whole new paradigm of light weight, interwoven architecture. textile structures weave in and out of public space, popping up in sport arenas, airports, tradeshows, urban parks, shopping centres and residential projects.

(Watts 2007, 21) speaks about metal screens stating that the use of stainless steel mesh in facades and, more recently, copper mesh, has developed over the past 10 years. From its origins in industrial applications, such as conveyer belts, stainless steel mesh is used in facades for a variety of functions such as solar shading to glazed walls, full height balustrade guarding, and as visual screens to backing walls.

There are essentially 3 generic types: fully flexible mesh, mesh flexible in one direction, and rigid mesh.
Fully flexible mesh is made from either a woven metal cloth strand in two directions, or alternatively as thicker wires which are crimped together in a grid. Woven cloth usually has a close weave with a light transmission range of around 1% - 5%, making it useful where opacity is required, such as solar shading.

However mesh which is flexible in one direction is probably the most widely used type, since the material can be tensioned along its length by cable ends which avoids the need for a highly visible supporting frame.

Fig 42 Hotel Golf y Spa Castillo de Gorraiz, Gorraiz, Spain by Iribarren, Rojas, Valls, Zabala. resource: www.diedrahtweber.com accessed 2 May 2010
For the facade of this Wellness-Hotel the flat wire mesh LARGO-PLENUS 2029 was used. In this case stainless steel flat wires were woven in combination with TECU-Gold wires. Based on the viewing position the facade now appears either golden or in a stainless steel color.

Fig 43: GKD metal fabrics, Media mesh stainless-steel textile .resource: AD "Architextiles" 2006, 30

Media mesh interweaves digital imagery and special LED strips at regular intervals. the LEDs display digital images such as logos, advertising promotions, animation and film, and can be controlled romotely through a web-based user interface and also interact spontaneously with weather changes.

This woven mesh incorporates another element in its weave harnessing technological advances. transforming the "metal fabric" into a Fabric screen.

Fig 40,41 :Dutch architects Cepezed have designed a wind responsive façade for their office building in Utrecht in collaboration with Ned Kahn Studios. Resource: http://www.arplus.com/3999/vertical-canal-facade-utrecht-netherlands-by-cepezed-and-ned-kahn-studios accessed om 8 May 2010

The façade is made of a 300 square metre area of stainless steel mesh which holds thin transparent plastic disks. Wind causes the mesh to vibrate and move the disks which 'ripple and create intricate patterns in the light'. Second-skin façade of teflon-coated and open-weave fibreglass textile. The façade screen was inspired by textile applications in horticulture, and is extremely light in comparison to other second-skin solutions. The textile functions as a sunblind without simultaneously impeding the view of the outside world. Above all, it makes it possible to open the windows of the building, even at a great height, without being troubled by the wind. The light turbulence behind the textile neutralizes the force of the wind, so that the cavity between the textile and the thermal facade is relatively tranquil, although it does enjoy a constant supply of fresh air.

CRITIQUE

This research proves that there are many possibilities for a multidisciplinary design hybrid between architecture and textiles through weaving: from a macro (urban) to a micro (surface\ facade) scale. There is an extremely lively, experimental and innovative dynamic exchange taking place between architecture and textiles, creating new range of possibilities that take both disciplines in exciting new directions through understanding the abstract notion of weaving and its relevancy to design.

Textiles and weaving also make references to society and culture, and Architecture has moved into an ara that demands a more fluid, adaptable, interactive, variable, multimedia functional and dynamic approach and it is my belief that new [architextile] forms and aesthetics may be better able deal with these shifting demands. For architecture to keep up and express these accelerating changes, it must adapt to new methods and redefine its governing principles.

Proving that the process of weaving can be integrated into design spatially and formally to meet the demands of these new emerging systems.

This shows that process of weaving is a multi layered one that continues to rigorously interrogates making and meaning in architecture.

Design Development.

My aim is to explore the concept of archi-textiles further in my design proposal, responding to climate, society and the requirements of the programme.

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