a contemporary dance company and performance areas.

adriaan wooding

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

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University of Pretoria

Study Leaders:

-Jacques Laubscher

Pr. Arch

Mentor:

-Marianne de Klerk

Pr. Arch

UDISA

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“Choreographers are poets who tell stories through movement”.

(Sifiso Kweyama)

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Figure 1 - scene from cage and cunningham documentary.

abstract

Contemporary art manifested as a reaction or addition to preceding arts. It either developed as a stark opposing contrast, or borrowed from the original in attempts to expand. This is equally true for all branches of art, including architecture and dance.

This dissertation investigates dance and the role of the choreographer, as spatial informant for architecture. The author used selected dance performances as design generators. This process was largely based on the work of the architectural firm, UN Studio. It expands on the freedom of the architectural design process and defines a balance between ‘fantasy’ and ‘reality’.

A contemporary dance company and adjoining performance areas was proposed within the urban environment of the Pretoria Central Business District (CBD). The site selection was supported by the proximity of an existing theatre. The proposed project responds to the guidelines as formulated by the student urban framework, entitled SchizoCity. SchizoCity suggests a new pedestrian layer and explores the ‘opening’ of existing arcane city blocks by adding alien programs or forms.

chapter 01 introduction and overview

introduction

This thesis explores the possibility of using a different method to generate an architectural design. The relationship between program and form is investigated. The balance between 'reality' and 'fantasy' in the design process is studied resulting in an imaginative, intuitive, subjective and emotional process of form and spatial generation, combined with the reality of tectonics and site.

This method is an alternative attempt to the monotonous design process that has manifested during the author's studies. This established process proved stagnant and tedious. It is the author's opinion that architect's fantasies are mostly expressed during dinner conversations and seldom realised in the product. The architect should also 'entertain' with his/her architecture.

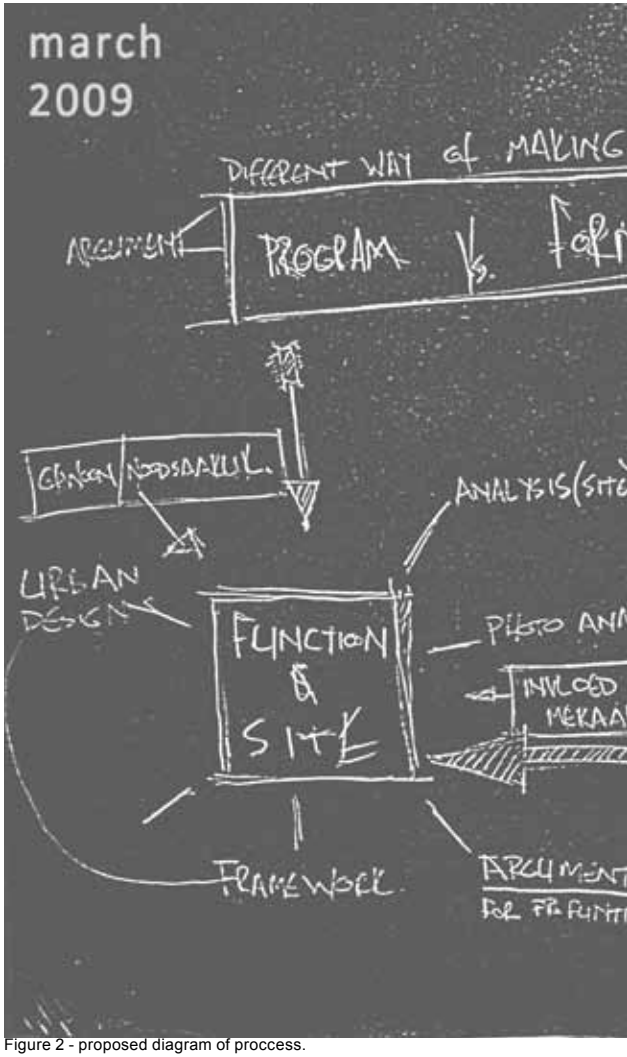
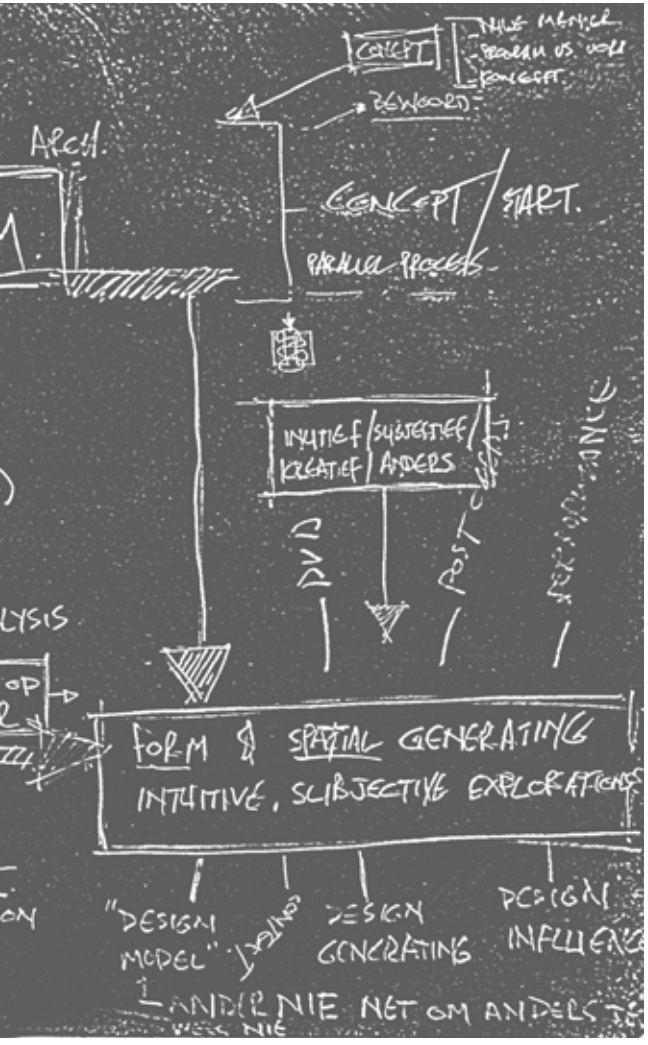


Figure 2 - proposed diagram of proccess.



overview

The exploration looks towards contemporary choreography and dance as form generator. In addition the locale serves as an influential factor in a series of spatial generating experiments. The project culminates in an contemporary dance company with associated performance areas. The proposed site is located adjacent to the Unisa Little Theatre, on the corner of Skinner and van der Walt Streets resulting in a symbiotic relationship between function and site.

The objective of these experiments is to find a different way of reacting to a brief and a site. The outcome is a number of abstract physical models in which the imaginative aspect is translated from the mind to the site. The proposed projects are briefly:

Stage one

Using a number of contemporary choreographed pieces and interpreting the choreography to sketches. This is followed by developing it into three dimensional sculptural forms.

Stage two

Inviting four fellow masters students to attend a contemporary dance performance. During the performance interpretive sketches are drawn representing the movement they see on stage. These sketches are then developed into three dimensional sculptural forms.

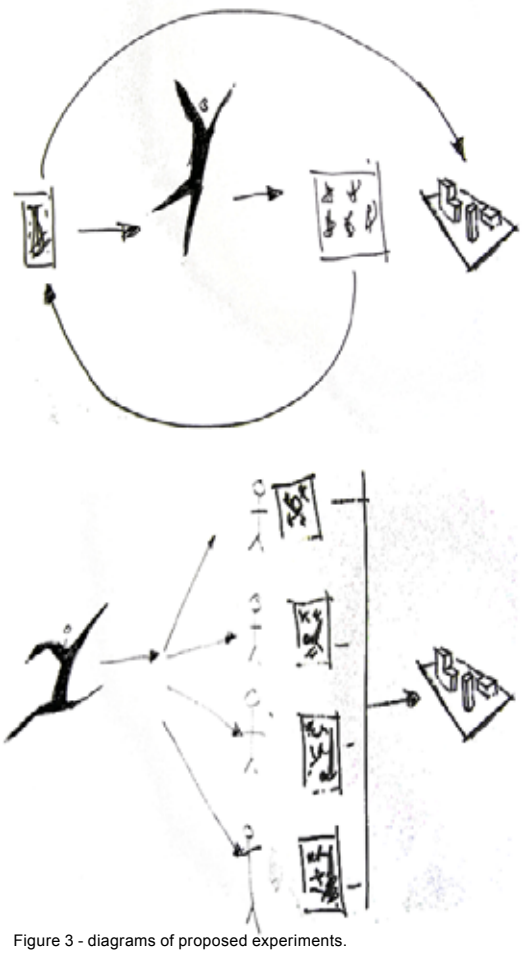


Figure 3 - diagrams of proposed experiments.

Stage three

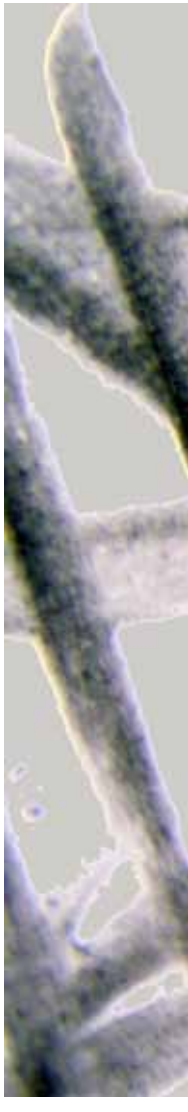
The formalisation of an urban framework takes place in tandem with the above experiments. This is further supplemented by site analysis, urban design development, material and tectonic investigation.

"The extreme focus on acquiring and perfecting design techniques has not been complemented by an equal development of the fantasy, the ideal image of what the product of those techniques would be and do. On the contrary, we seem to have arrived at a point where the fantasy has become repetitive, and thus the technique is becoming a pointless ritual" (Bos & Berkel, 2006: 14).

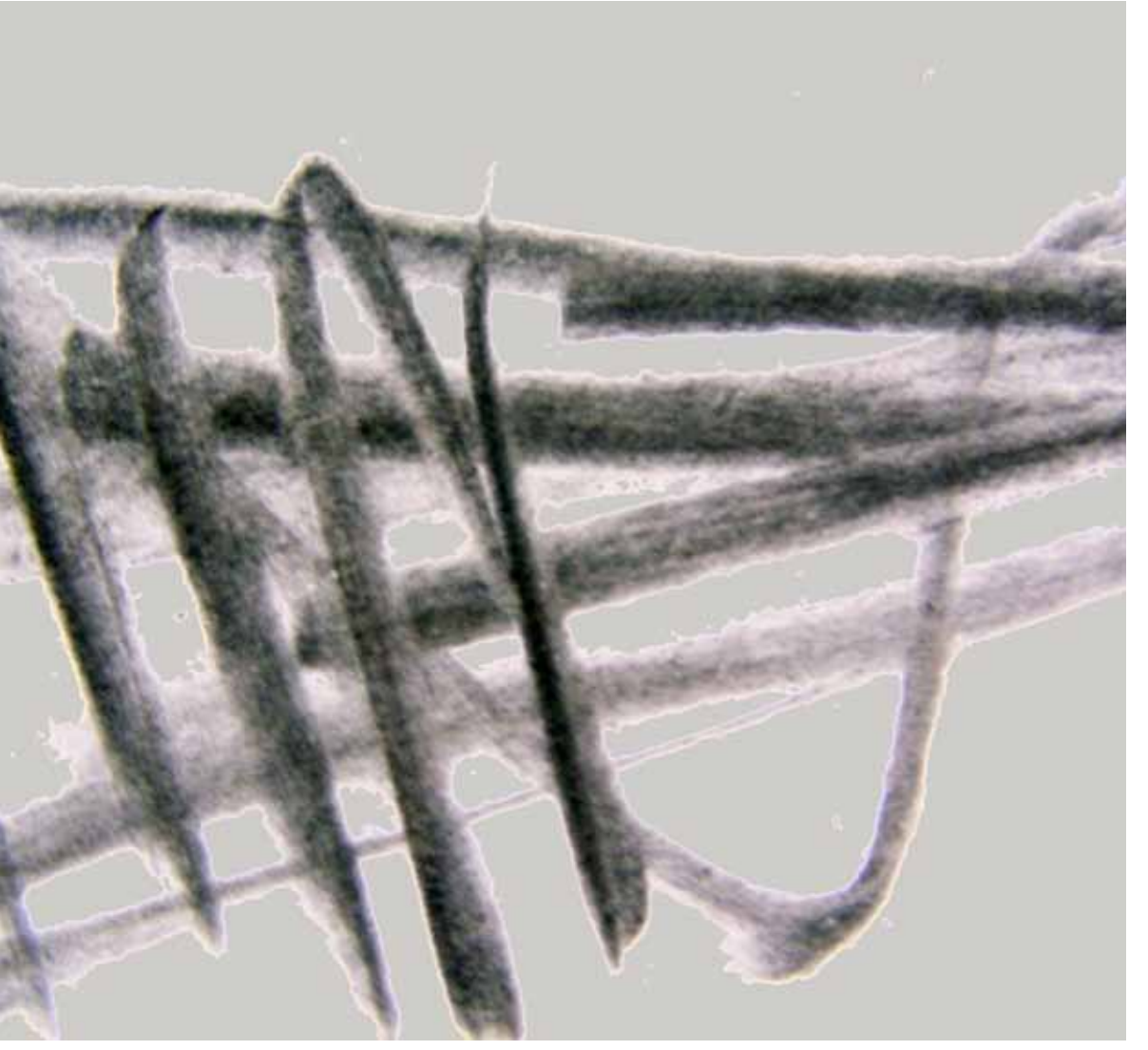
Stage four

The design process focuses on the immediate response to an external stimuli - the intuitive reaction. It aims to investigate a process that can be re-developed, re-interpreted and expanded upon in future. It attempts to find a valuable balance between the reality and the possibility.

This argument can be supported by first year design students being more adventures than senior students who have developed certain constraints within existing design processes during the course of their studies. The outlined process is a conscious move to the intuitive in hope to rekindle a spark of imagination.



chapter 02 argument



The argument investigates the architectural design process. The process of program versus form, and possibility versus reality. The history of contemporary dance is briefly reviewed followed by an examination of how these two professions can influence each other.

another way of producing architecture

Current architectural design lacks the application of 'fantasy' in the process and ultimately in the final product. When architects produce, via a process, a reasonable product, they (ab)use this established process to deliver different results. When repeatedly using this set formula we must not be surprised if the results are quickly categorized into a 'style'.

"…it seems to us that only those who continually practice an experimental approach - concentrating all our efforts in a completely unknown outcome - are the ones who can truly be said to idealist of this world" (Bos & Berkel, 2006: 11).

Therefore the suggestion is made that the outcome must not be apparent as part of the process and could even be what Frederick Kiesler wanted of his Endless House:

"Kiesler knew perfectly that the Endless House would never be built. Towards the end of his life he touched on this question in many of his letters and theoretical writings, in which he speaks of the project as an idea, a work-in-progress destined to pass from hand to hand while changing form" (Sonzogni, 2003: 55)

The architectural firm UNStudios uses another approach to solve design problems. They define it as "architecture as an art of combinational, acknowledging that we will never, unlike the risk-free architect, enjoy the feeling of being absolutely in the right, nor accomplish as much as the successful pragmatist" (Bos & Berkel, 2006: 11).

This different way of doing things is not an attempt to be original just for the sake of being original, it serves a specific purpose. According to UNStudio's the current processes are not delivering a sufficient amount of solutions for the demands and problems of contemporary society.

In this ‘original’ process UNStudio’s makes use of ‘Design Models’. This for them are:

> “…packages of organizational or compositional principles, supplemented by constructional parameters. The design model does not include site-specific information; it exists at a more abstract level and may be implemented in various situations and projects. It is formulated in such a way that it becomes an internal point of reference that can be used for the duration of the process to help check if the design is progressing according to your principles and purposes” (Bos & Berkel, 2006: 19).

With their design models UN Studio tries to get around prejudiced arguments by developing never seen before concepts which have not been influenced and changed by society. Examples are Inclusive Principle, Mathematical Model, Blob-to-Box Mother Model and V Model.

Figure 4 - UN Studio design model: inclusive principle.

Figure 5 - UN Studio design model: mathematical model.

Figure 6 - UN Studio design model: blob-to-box mother model.

Figure 7 - UN Studio design model: v model.

Inclusive principle

description

NMR Laboratory, Utrecht, Nederland.
2001.

For this project the design model was inspired by the specific research technique Neutron Magnetic Resonance (NMR). NMR analyses molecular structures and the behaviour of proteins with the aid of high-frequency magnetic pulses. (Bos & Berkel, 2006: 46).

process

Figure 9 - conceptual diagrams showing the concrete folding.

product

Figure 8 - ramp to first floor, NMR Laboratory, Utrecht.

Mathematical model

description

Möbius House, Het Gooi, Nederland.
1998.

The Möbius strip was interpreted and transformed to a diagram leading to the Möbius House. Architectural elements (space, time, light and materials) were used to structure the interpreted diagram (Bos & Berkel, 2006: 150).

process

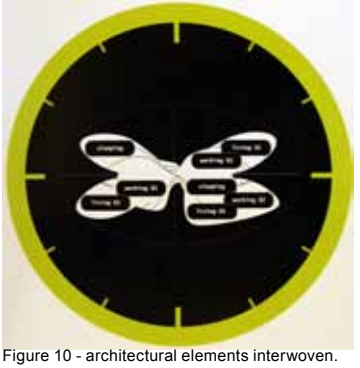


Figure 10 - architectural elements interwoven.

Figure 11 - a virtual cross dividing house.

product

Figure 13 - exterior of Mobius House, Het Gooi.

Figure 12 - interior of Mobius House, Het Gooi.

Blob-to-Box Mother Model

description

Musical Theatre, Graz, Austria. 2008.

This design model uses the combination of two contrasting typologies, the blob and the box. The model consists of a spiral directed horisontally, of which the ends are entwined with its middle part to generate the internal organization. In an endless composition the spiral transforms itself from blob to box, and vice versa. (Bos & Berkel, 2006: 254).

process

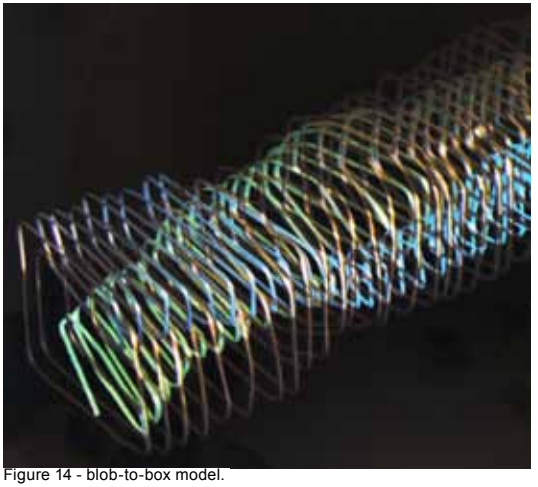


Figure 14 - blob-to-box model.

product

Figure 15 - Music Theatre, Graz, Austria.

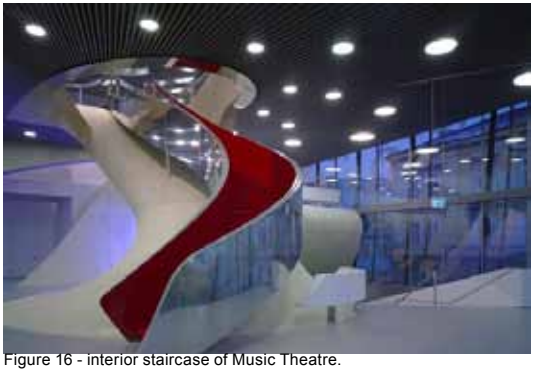


Figure 16 - interior staircase of Music Theatre.

Figure 17 - interior staircase of Music Theatre.

V Model

description

Wien Mitte Competition, Vienna. 2004.

In this proposal a crossing-point model is used to develop a system that supports the arrangement of certain elements (Bos & Berkel, 2006: 300).

Figure 19 - conceptual model of Wien Mitte.

process

Figure 18 - application of V Model to process.

product

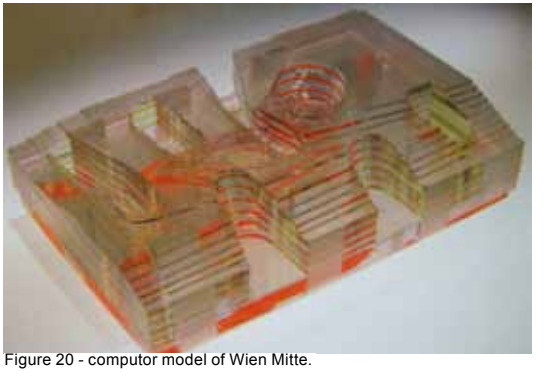


Figure 20 - computor model of Wien Mitte.

Figure 21 - rendering of Wien Mitte Urban proposal.

This thesis uses a similar approach and creates its own ‘design model’. Simultaneously the design model is informed by the program and the context. It uses contemporary choreography as generator of space, form and urban movement. It aims to achieve a balance to be found between the ‘fantasy’ of the model and the ‘reality’ of constraints. Ultimately the design is a result of interactive parallel processes.

Günter Feuerstein argues that the embracing of functionalised architecture results in a certain level of comfort, “the death of fantasy, imagination, vision and intuition” (Kraus, 2003: 62).

Figure 22 - Frederick Kiesler with model of Endless House, 1959.

Figure 23 - image of Frederick Kiesler’s Endless House.

In order to enhance the final product the design process should vary. A continuous change of design generators adds collectively to produce an ‘unknown outcome’. The intuitive nature of this process necessitates an spontaneous relationship between designer and product.

“It is our emotions and the expression of them that make us artists” (Giedion, 1967: 430-432).

canvas versus image

The canvas represents a neutral plane as a backdrop for activity. The canvas can evolve as required, from blank to rendered supporting the image or activity. When viewed from the opposite side the canvas becomes animated. In this dissertation both of these conditions have value. However the animated image generates more interest through the occupation of space through movement. The reflected view could result in the user taking notice and lingering in anticipation.

“For if, as we believe, the role of architecture is to make us see ourselves and the world around us in a new way. It… aims of intensifying the gaze, inspiring thoughts and images, and making it attractive for people to linger and return to the places we make for them” (Bos & Berkel, 2006: 371-372).

These ideals encourage the discovery of buildings and the spaces they frame. These views should be choreographed to appear incrementally within cities and landscapes. Enhanced spatial experiences should offer the dweller an unique event that remains in the memory long after the user has left the environment.

Within a media driven society the image has lost its potency. The image has to return to the criteria of timelessness; it has to have that nameless beauty. This is equally relevant for representing more than an elaborate envelope where the space does not occupy all its potential.

The generation, the process, of the image becomes significant. The image is loaded with controversy and represents a never ending thesis, anti-thesis and synthesis.

Order does come out of the process, but composing itself is not a process of talking things and putting them in order, as one would arrange objects in a room" (Beiswanger, 2009: 17).

UN Studio works extensively with the 'after image'. This is defined as:

"We question if and how we can replace the manipulative, one-dimensional image with something far more advanced and tangible: the 'after image', the one you take home with you, an inexhaustible, ever-renewing composite of perceptions, memories and thoughts" (Bos & Berkel, 2006: 370).

Through exposing the symbiotic relationship between canvas and image this thesis aims to create a memorable experience. The resulting product contributes visually and spatially, adding an intimate layer within the urban environment. These glimpses into the proposed program will remain with the urban dweller, thereby enhancing the individual experience of the city.

contemporary dance

Classical dance was established in the French courts of Louis XIV (the Sun King) in the 1660s and developed into ballet. Ballet is defined as a form of classical dance that demands highly developed techniques, precision and grace executed according to specific gestures and flowing patterns that dominated Western Society until the end of the 1900s (Internet: Artsalive. 2009). At the turn of the century a paradigm shift in artistic performances was brought on mainly by the writings of Darwin and Freud (Brockett: 2009: 177). Even though this shift happened more or less simultaneously in the visual arts and architecture, it was not as prominent and well documented as the Modern Movement of the arts, but is today recognised as Contemporary Dance.

Contemporary dance evolved as a reaction against classical dance. Classical dance, or commonly known as ballet, has strict rules and convention, sometimes described as a set formula. Contemporary dance on the other hand, is an open ended discovery

of human movement (Futter: Interview, 2009). Contemporary dance uses classical ballet as basis allowing the choreographer to explore beyond the classical formulas (Le Roux: Interview, 2009). Similar to the Expressionist painters and sculptors, contemporary choreographers have been inspired to combine different ethnic styles of dance in an attempt to add a creative layer onto the existing classical. The purpose of performance in Western culture has always been to entertain, but with the commencement of the Contemporary Dance Movement performance took on another role: the opinionated role (Internet: Brockett, 2009:185-188).

Figure 24 - images of classical dancers versus contemporary dancers.

Contemporary South African dance productions (work done by Mzansi productions and Dance Umbrella) compared with contemporary European and USA dance productions (Alvin Ailey American Dance Theatre and the Netherlands Dance Theatre) is not up to standard. This is due to a host of factors, amongst others, lack of discipline, funding, technical expertise, lack of a comprehensive approach and documentation of creative expressions. Timothy Le Roux (Interview, 2009) argues that current South African contemporary dance has become a self-indulgent, dull and superficial stage.

dance choreography versus architecture design

Dance has to be choreographed; in a similar way architecture has to be designed. Thus the choreographer, as the designer, sculpts the end product according to their vision. Defining the act of choreography can be as intricate of a task as defining the act of architectural design. According to Beiswanger "…to choreograph a dance is to design it in the process of making it, for we can hardly conceive of an art-making process which is not a designing activity as well. Thus designed, when the dance is presented in finished performance its order, its quality of design, makes itself manifest as the very clarity with which the dance's shape takes its presence before us" (Beiswanger, 2009: 13).

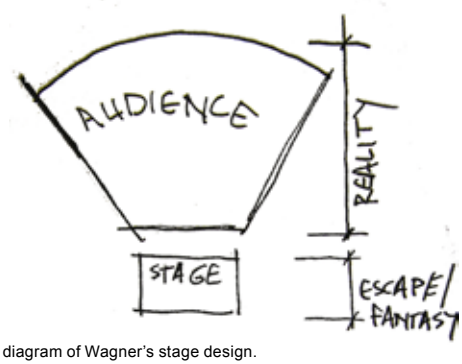
Similarities exist between the process of choreography and architectural design. Choreographers do not have the same restrictions as architects, such as clients and building regulations, and are allowed to be free and creative as actual artists. It is the opinion of the author that the discipline of dance provides the choreographer with a host of opportunities to express their 'fantasies' and converting them into reality.

A choreographer works with chance and discovery during the process to generate a product and relies heavily on intuition (Beiswanger, 2009: 13). High quality choreography always comes from the heart and therefore a passion for the process should exists that the product will communicate (Van der Nest: Interview, 2009). Architectural design should exhibit similar qualities to break away from the current monotonous state of the majority of South African Architecture.

Choreography has two main tasks: one that gives opinion on societal matters; and another that creates mystery, taking the audience away from reality whilst entertaining. Tshwane theatres already presents only the latter and is typically based on Richard Wagner's fan-seating known as a classical theatre (see figure 25).

Figure 26 - stage model for opera 'Tristan and Isolde' by Richard Wagner.

Figure 27 - stage model for opera 'Der Meistersinger von Nurnburg' by Richard Wagner.



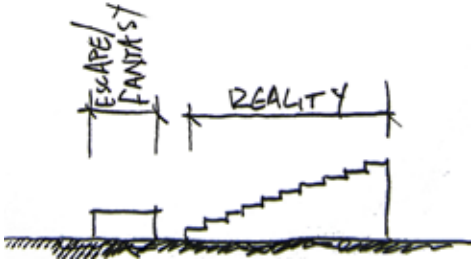


Figure 25 - diagram of Wagner's stage design.

Figure 28 - seating arrangement of Breytenbach Theatre.

Figure 29 - seating arrangement of Unisa Little Theatre.

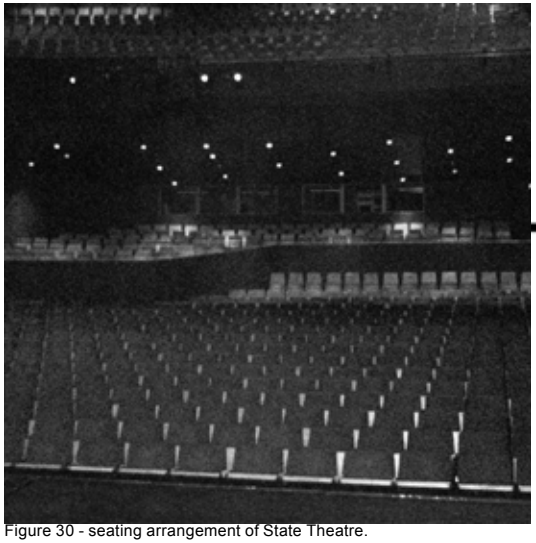
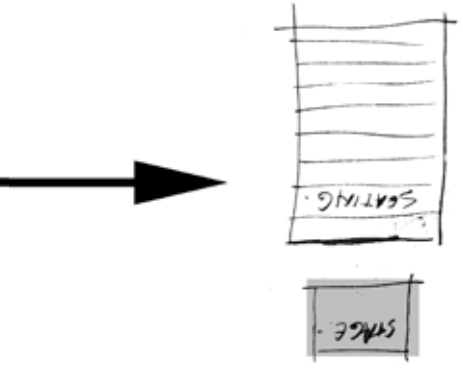
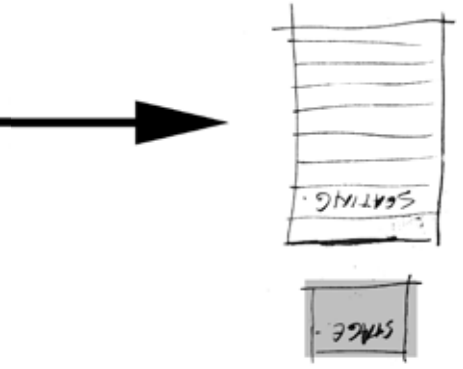


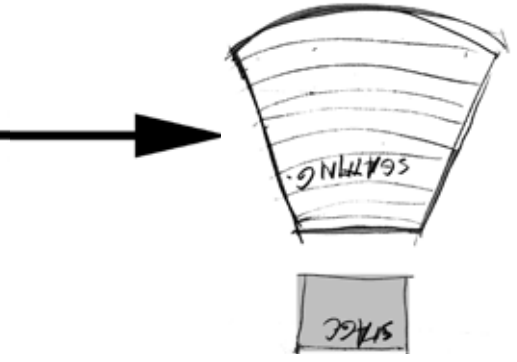
Figure 30 - seating arrangement of State Theatre.

Main examples of classical theatre's in Tshwane are the State Theatre, the Breytenbach Theatre, Capital Theatre and the UNISA Little Theatre. This style of seating was designed by Wagner to be more democratic and to distinguish between the every day and the 'fantasy' (Brockett, 2009:188).

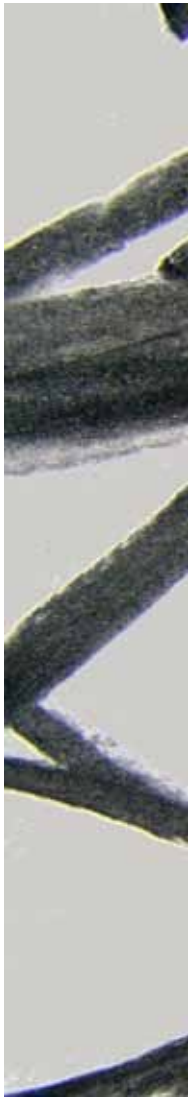




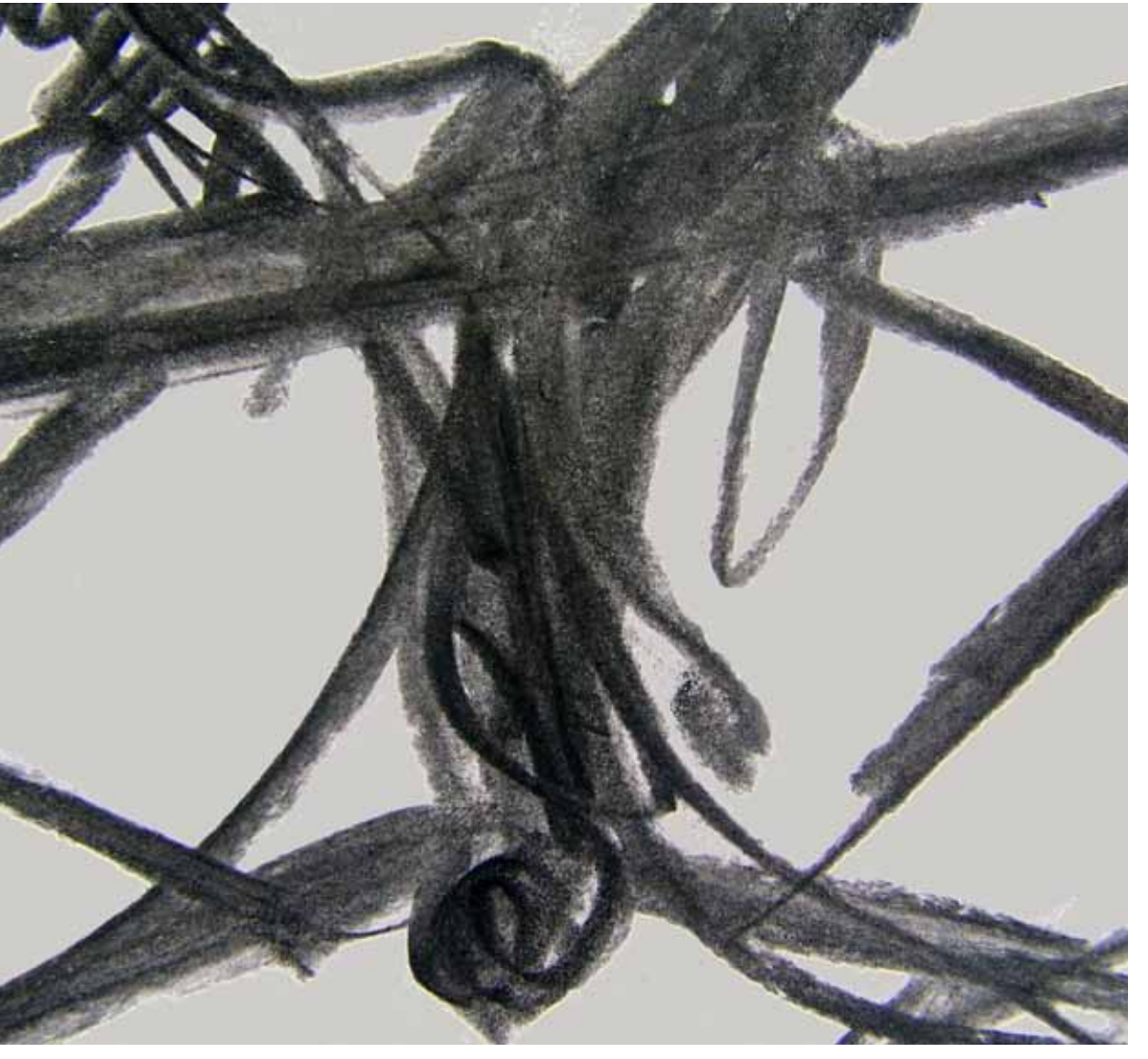
In Pretoria a formal stage for the opinionated and ever changing function of contemporary dance does not exist. As part of the requirements for this dissertation the author proposes a contemporary layer, in the form of architecture, being placed onto the existing classical layer (later referred to in chapter five). It presents a performance area for the ever changing opinion and a stage that should be able to change and adapt as the times and the views change.



"Theory comes before insight" (Erik Holm)



chapter 03 introduction to framework and site



framework

SchizoCity is an experiment that questions accepted practices of urbanism. These practices often fail to address complexities of existing context and fabric. Within this framework, process replaces product, mindset replaces solution. It focuses on a generative ideology that exposes the latent multiplicity of the current urban situation.

Figure 31 - original figure ground.

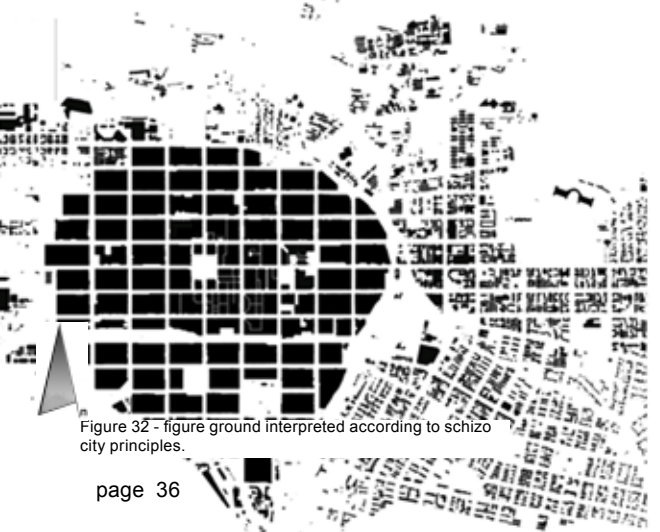


Figure 32 - figure ground interpreted according to schizo city principles.

The SchizoCity framework was done as a group project and set out to mainly investigate the pedestrian friendly nature of the Pretoria CBD and immediate areas.

In developing the discourse surrounding the urban framework proposal it was necessary to research existing concepts and theories regarding the development of urban space. The relationship between programme and existing block typologies that occur in many contemporary cities was the main theme of discussion.

The grid has been the de facto generator of urban form since antiquity. A method employed by civilization to logically define its presence on the earth. This framework accepts the condition, but questions the nature of urban design itself. It opposes the nominally efficient process of planning and zoning. The framework proposes a large-scale architectural mindset that is spatially and programmatically driven. This allows for specific interpretations of context and program, without being restricted by an inhibitive framework.

Haussmann's process of strategic rupture, whereby the block both physically and experientially, creates opportunities for previously interiorised spaces of the block is opened to become the theatre of collective annexation. It unlocks the possibility of individual modes of expression. Previously inaccessible space supports an urban tissue of greater depth and experience. This tissue forms a framework for human

Figure 33 - example of Schizo City framework.

experience that could successfully support its inhabitants and their complex needs. Jan Gehl, a Danish architect, subscribes to the aphorism that life takes place on foot. Mechanisation with the advent of automobiles, computers and the internet has a direct influence on, the possibilities and opportunities for chance encounters. Interaction, that were for so long an everyday occurrence, have diminished (Barnett, 2003:17) – people have stopped engaging with their environment on a variety of levels.

This situation Gehl believes can be remedied through the design of a physical environment that promotes 'optional activities' such as lingering in the shade of a tree, watching a water fountain, pausing for a cup of coffee etc (Barnett, 2003:17). These aspects in turn promote an environment of sociability and community that is crucial to the convivial nature of a successful urban space.

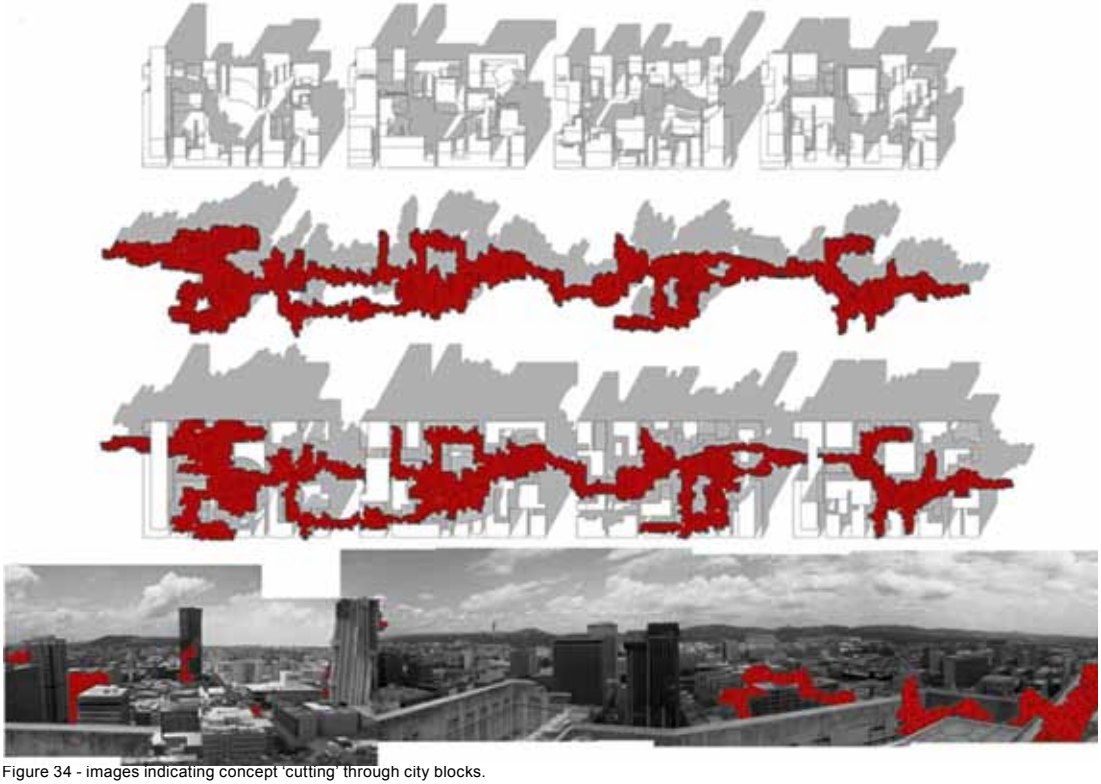


Figure 34 - images indicating concept 'cutting' through city blocks.

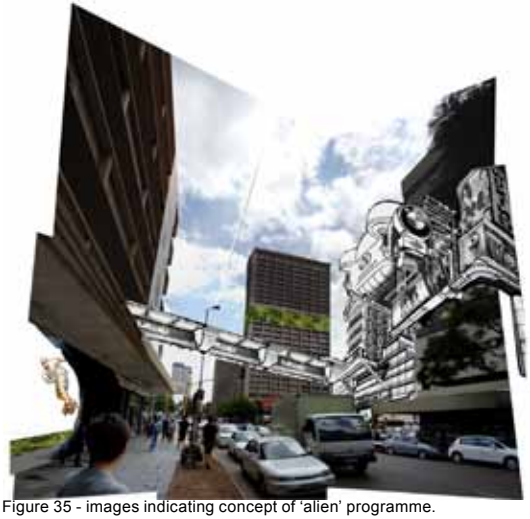


Figure 35 - images indicating concept of 'alien' programme.

Parallel to the spatial investigation of the city, a programmatic exploration is necessary to achieve the goals of the proposed framework. It is suggested that programmes that exist on the fringes of the city, or that might be considered alien to the urban environment be introduced into space provided by the alternative block typologies. These programmes are deliberately chosen as not to compete with the existing programmes of the city but to be complimentary and catalytic processes. With reference to SchizoCity the proposed project intends to add another layer of 'exploration' within the city.

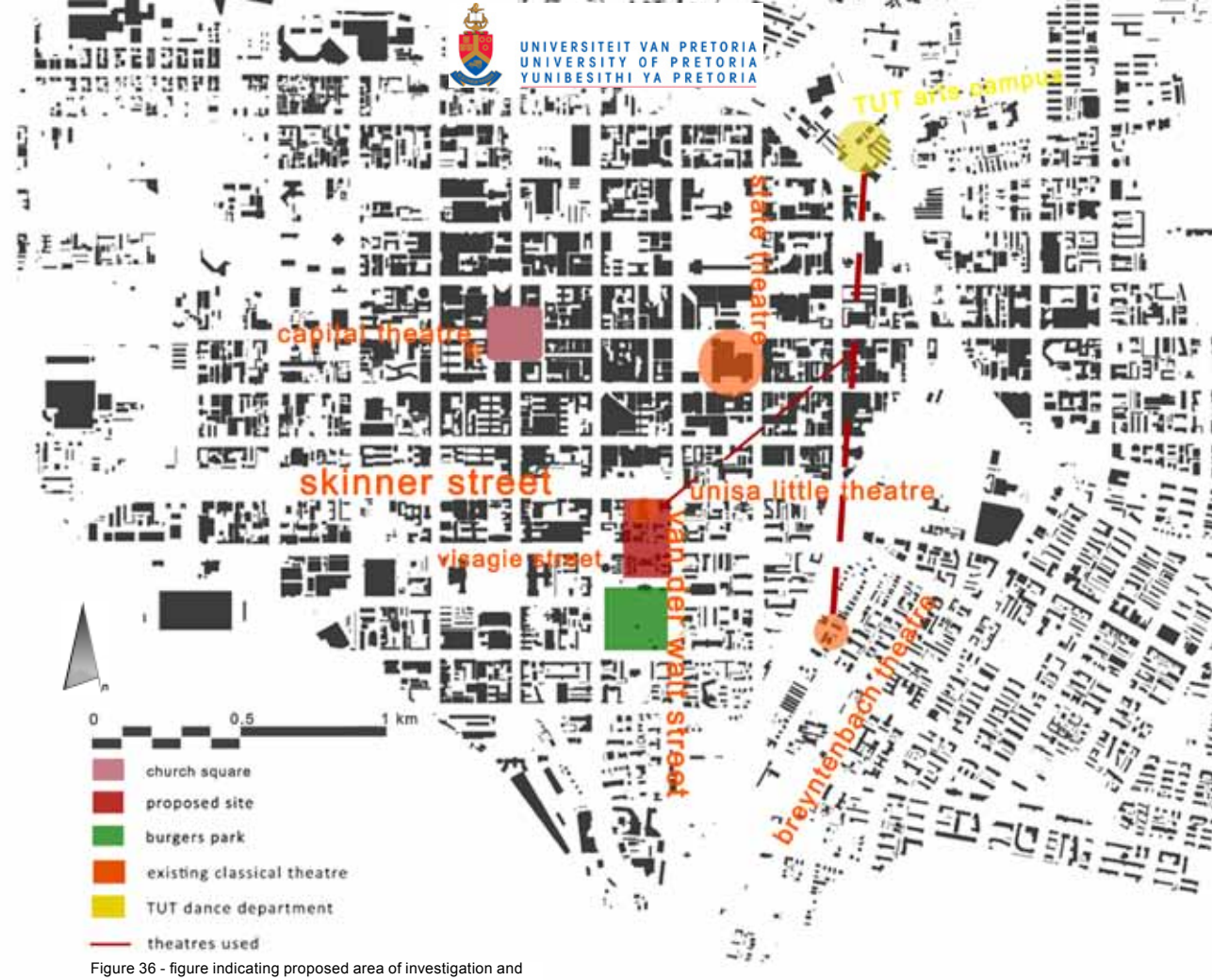


Figure 36 - figure indicating proposed area of investigation and the location of existing 'classical' theatre's.

introduction to site

The proposed site is located in the area surrounding the Unisa Little Theatre. Situated on the corner of Skinner, van der Walt and Visagie Streets. The site extends South towards Burgers Park. In Tshwane there are a three major theatres, the State Theatre, the Breytenbach Theatre and the Unisa Little Theatre. These theatres are 'classical-theatres'. Main pedestrian movement occurs in a north-south direction, between the train stations and the CBD. The Unisa Little Theatre is located along this route and is placed on one of the three main crossings over Skinner Street. The proposed site, in accordance with SchizoCity, will emphasize the existing routes and provide additional routes.

Figure 37 - diagram indicating the division between Pretoria CBD and residential area created by Skinner Street and the proposed site.

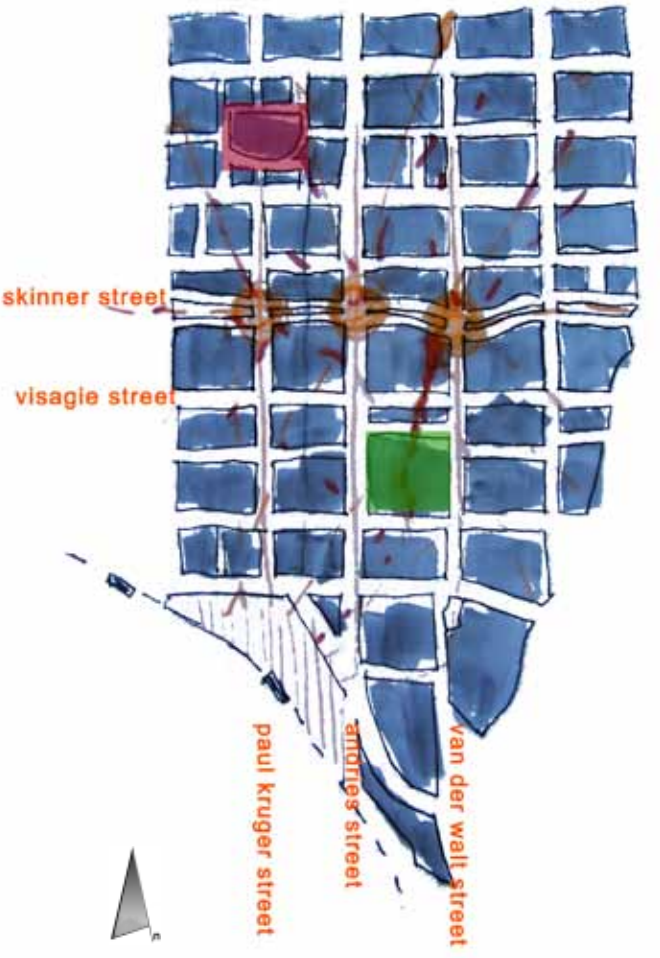


Figure 38 - diagram of north south pedestrian movement and three main pedestrian crossings over Skinner street.

This dissertation focuses on the area between Burgers Park and Skinner Street. It however proposes that the study area expands to encompass a stretch from the Pretoria Station North towards to the edge of the CBD defined by Skinner Street.

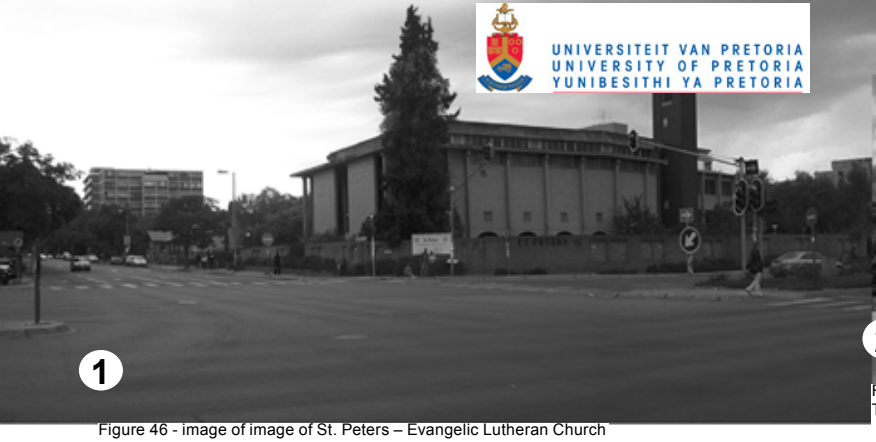


Figure 46 - image of image of St. Peters – Evangelic Lutheran Church

Figure 39 - existing north entrance to Unisa Little Theatre.

the proposed area of investigation

(images by author)

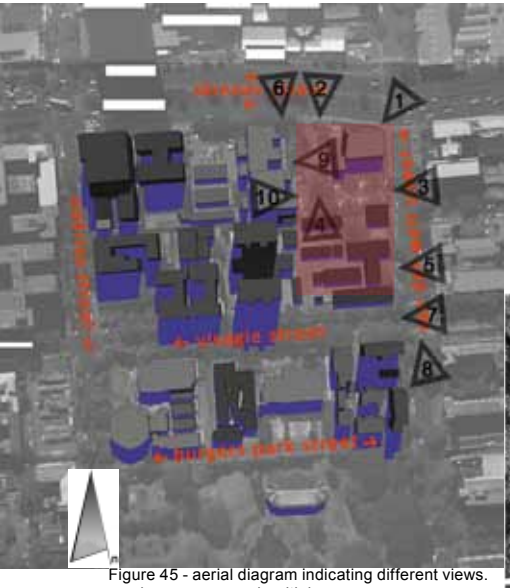


Figure 45 - aerial diagram indicating different views. numbers corresponds with images.

Figure 40 - Unisa Little Theatre.

Figure 41 - existing parking area.

Figure 42 - existing quart yard.

Figure 43 - existing spill out space.

Figure 44 - existing parking area.

Figure 47 - existing dadel palm.

Figure 48 - existing temporary structures.

Figure 49 - existing temporary structures.

Figure 50 - existing entrance to Unisa Little theatre.

Figure 51 - west view along Visagie Street.

Figure 52 - north view along van der Walt Street.

Figure 53 - foyer space and entrance of Unisa Little theatre.

Figure 54 - Unisa Little theatre.

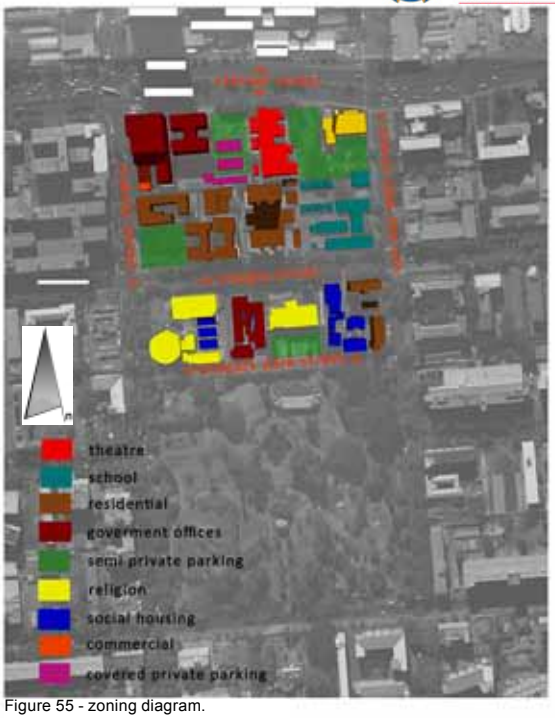


Figure 55 - zoning diagram.

The proposed site is surrounded by residential and commercial blocks, hotels, social housing, a theatre and a number of churches. There is a temporary school structure on the corner of van der Walt and Visagie Streets. It is proposed that these temporary structures be removed and the occupants of the school be relocated to more appropriate permanent facilities in the surrounding area.

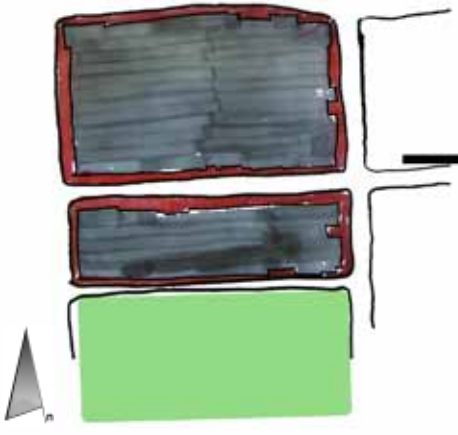


Figure 57 -diagram of existing Noli map.

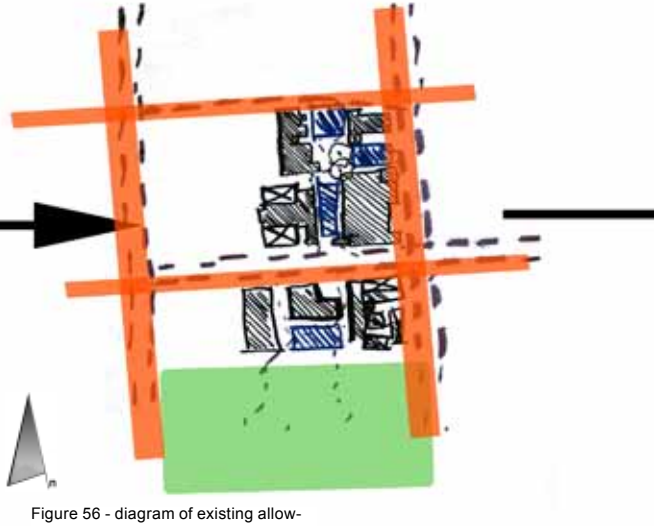


Figure 56 - diagram of existing allowable pedestrian movement.

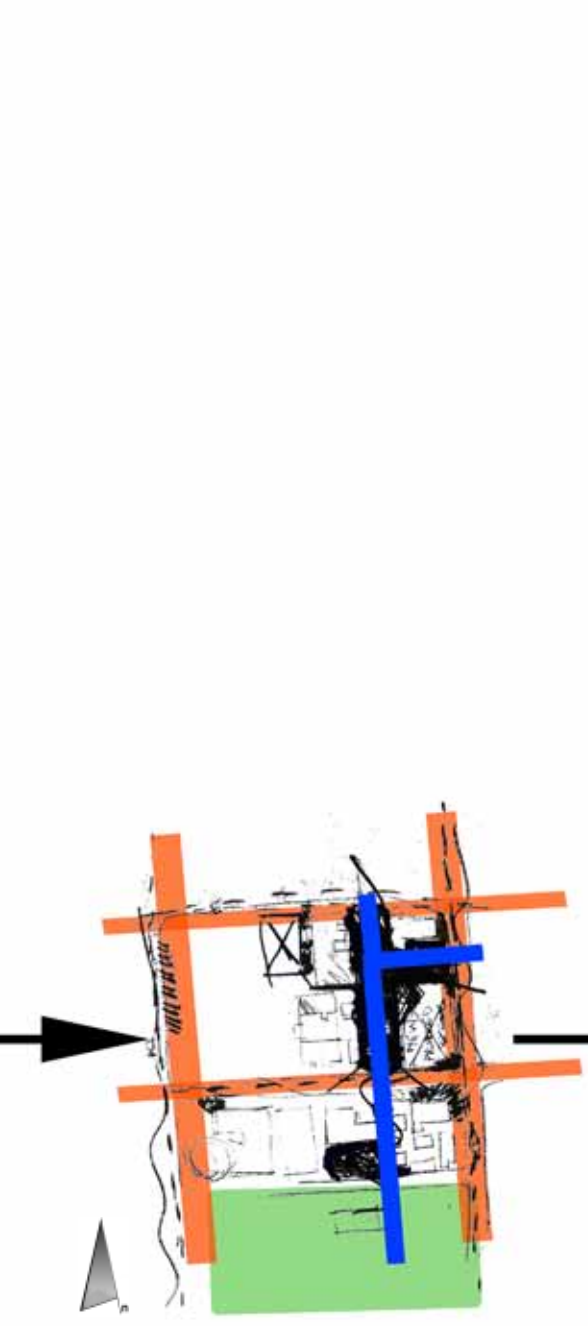


Figure 59 - diagram of proposed pedestrian movement.

Figure 58 - diagrams of proposed Noli map and 'opening' up of the city blocks.

Figure 60 - diagram of proposed site.

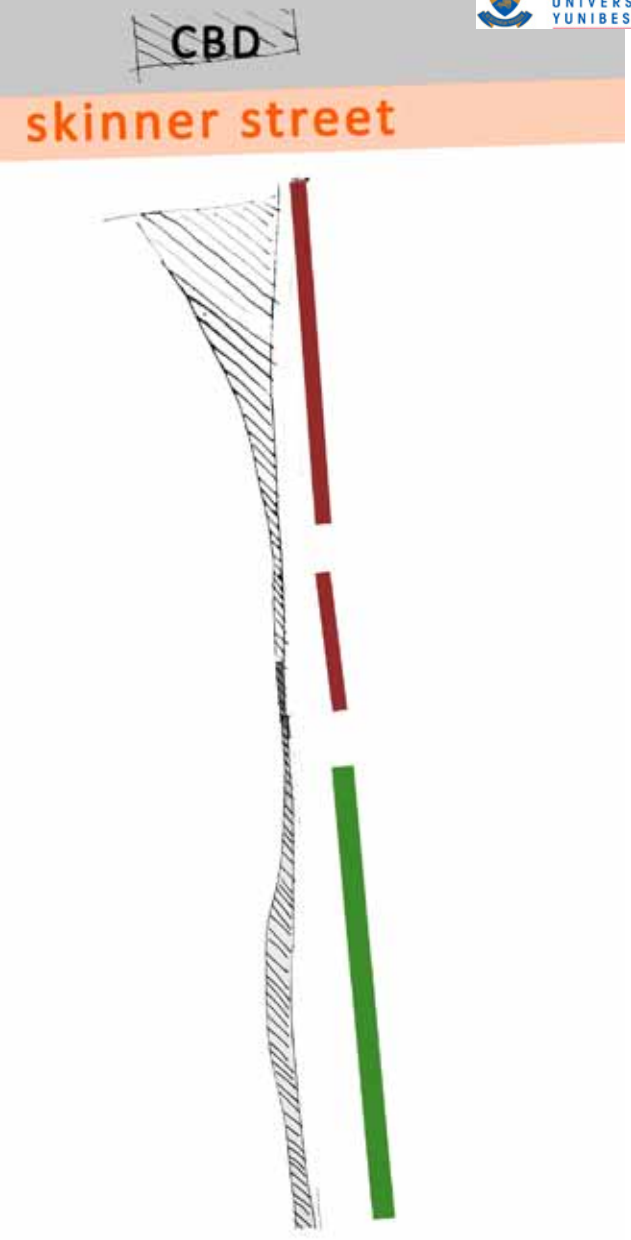


Figure 61 - sectional diagram of proposed build up before the 'break' of Skinner Street.

proposed site and interpretation of framework

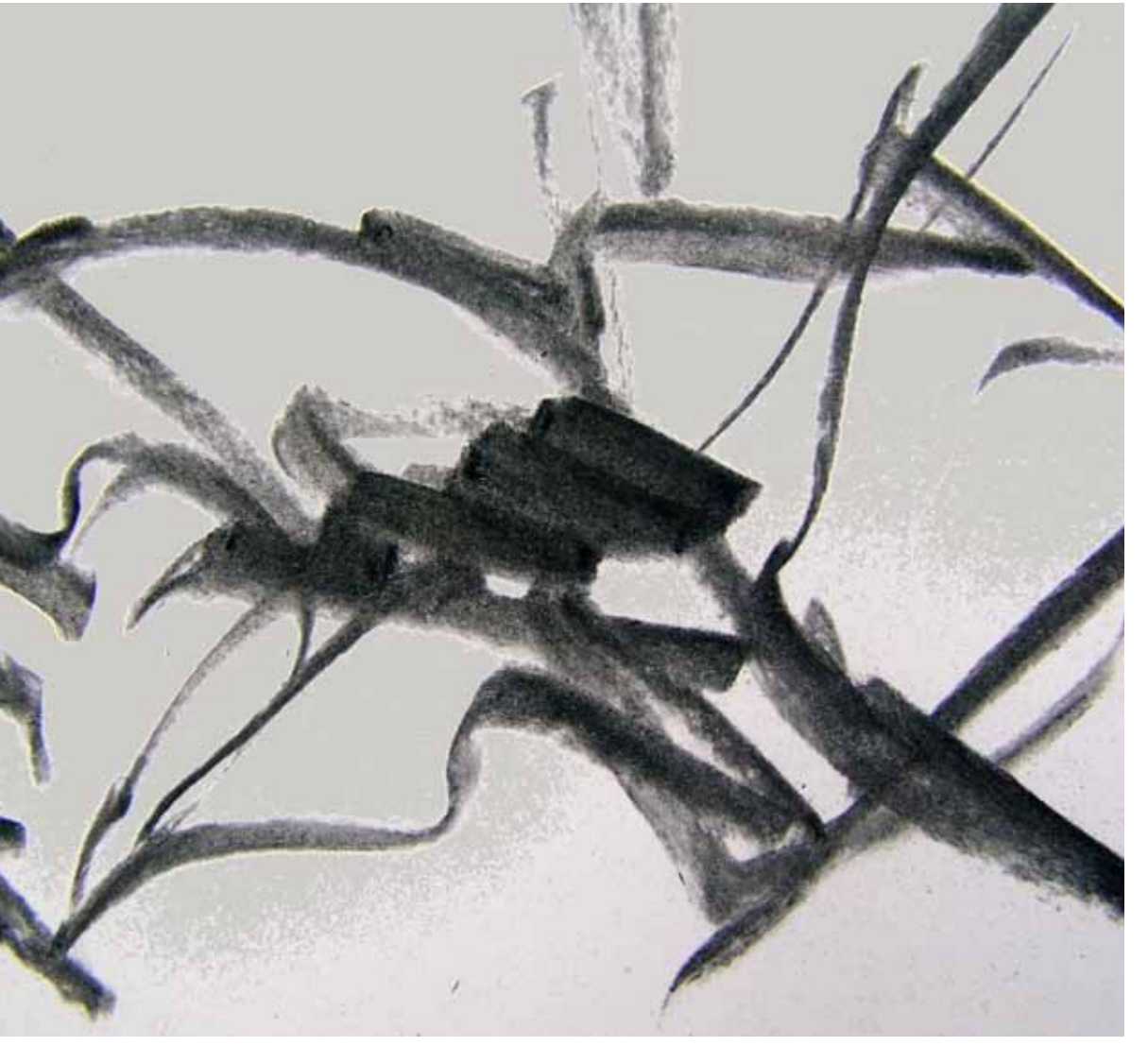
The proposed site is located within the vicinity of Burgers Park. The site starts at the Pretoria station and creates a 'pause' space before entering the 'rush' of the CBD complimenting Burgers Park. The site becomes a transition between the CBD and Burgers Park. It offers a second possibility of movement for the city dweller. A more intimate and novel layer that does not compete with the daily movement patterns, which mostly happen on street edges.

The program includes the following:

- A number of performance areas, ranging from open air theatres to a closed 'Black Box' theatre.
- A Contemporary Dance Company establishment.
- An eatery, consisting of a lounge bar, a formal seating and outside foyer areas complimenting the major 'Black Box' theatre.
- Recreational landscaped areas with both hard and soft surfaces.

The surrounding residential structures are supplemented by the possibility of a night life. The presence of more dwellers will reintroduce 'eyes' on the street. Basement parking is provided for both users of the site and visitors to the city.

chapter 4 design generating experiments



introduction

As part of the investigation into the design process a number of design generators, or experiments, have been identified. These explores the possibility to add ‘fantasy’ as part of the design process. Dance and performances serve as primary reference for the generation or exploration of the programme. The aim of this process is to obtain a final product that relates to the programme it houses.

While observing a selected series of dance performance pieces, the author executed a range of interpretive sketches. These represent an intuitive response to the imagery presented by the performances. Although these sketches attempted to capture movement and dance it could not fully represent the essence of the choreography.

The above mentioned sketches were interpreted into a physical model. Utilising dry foam (known as ‘oasis’ in layman’s terms) as sculpting material, the choreography was expressed in volumetric properties. This expression was executed as an intuitive exercise with a more formal interpretation to follow at a later stage. In the formal interpretation design ideas were explored and made relevant to site based on the site analysis of chapter three and the programme.

Figure 62 - scene from sweet dreams used as generator.

Figure 64 - scene from sweet dreams used as generator.

Figure 65 - scene from sweet dreams used as generator.

black and white: sweet dreams

choreographed by Jiri Kylian

'Sweet Dreams' is one segment of the contemporary piece 'Black and White', choreographed by Jiri Kylian and performed by the Netherlands Dance Theatre between 1995 and 1997. Sweat Dreams was used, as one of four, for a design generator experiment.

Figure 63 - interpretive sketch by author.

Figure 66 - interpretive sketch by author.

Figure 67 - interpretive sketch by author.

Figure 68 - interpretive sketch by author.

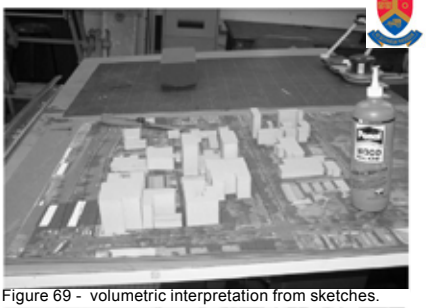


Figure 69 - volumetric interpretation from sketches.

Figure 70 - interpretation of model.

Figure 72 - interpretation of model.

Figure 73 - volumetric interpretation from sketches.

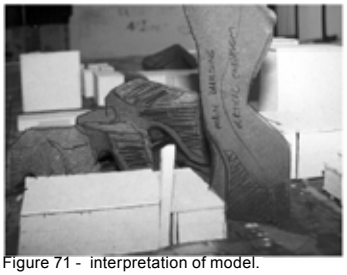


Figure 71 - interpretation of model.

Figure 74 - volumetric interpretation from sketches.

Figure 75 - volumetric interpretation from sketches.

Placement – fragmented but guiding movement.

Scale – imposing but not overwhelming.

Spatial – inviting. a set of different spatial qualities.

Movement – underneath buildings.

Relationship – contrasting and emphasizing.

From the interpretive sketches of the chosen dance piece, a base model of the proposed site was build. It was followed by placing the sculpted foam on site. This intuitive process informed the design and placement of the objects on site. Sweet Dreams was graceful and flowing, which in turn informed the forms and spaces generated.

Figure 76 - scene from no more play used as generator.

Figure 78 - scene from no more play used as generator.

Figure 79 - scene from no more play used as generator.

black and white: no more play

choreographed by Jiri Kylian

'No More Play' is another segment of the contemporary piece 'Black and White', choreographed by Jiri Kylian and performed by the Netherlands Dance Theatre between 1995 and 1997. No More Play (one of the four) was also used for a design generator experiment.

Figure 77 - interpretive sketch by author.

Figure 80 - interpretive sketch by author.

Figure 81 - interpretive sketch by author.

Figure 82 - interpretive sketch by author.

Figure 83 - volumetric interpretation from sketches.

Figure 84 - interpretation of model.

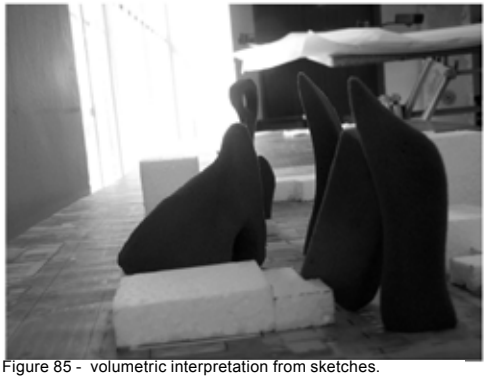


Figure 85 - volumetric interpretation from sketches.

Placement – fragmented. Visual icons and guides.

Scale – exploring the vertical element.

Spatial – large open space that is contrasted with vertical movement.

Movement – not that well defined; around buildings.

Relationship – contrasting and emphasizing, not only old versus new, but also horizontal versus vertical.

Figure 86 - volumetric interpretation from sketches.

Similar to the Sweet Dreams experiment the No More Play experiment generated sketches and volumetric objects and place them on site. No More Play was graceful and flowing, similar to Sweet Dreams, but with this generator verticality was explored and the object as visual orientation for the city user.

Figure 87 - scene from amadoda used as generator.

Figure 89 - scene from amadoda used as generator.

Figure 90 - scene from amadoda used as generator.

amadoda

choreographed by Sofiso E. Kweyama

Amadoda, an African piece, was performed as part of FNB Dance Umbrella 2008. It was choreographed by Sofiso E. Kweyama and performed by students from the Tshwane University of Technology Dance Department.

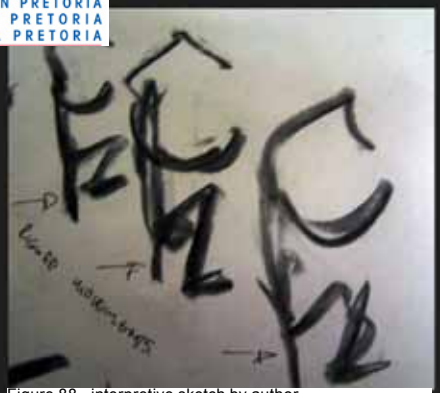


Figure 88 - interpretive sketch by author.

Figure 91 - interpretive sketch by author.

Figure 92 - interpretive sketch by author.

Figure 93 - interpretive sketch by author.

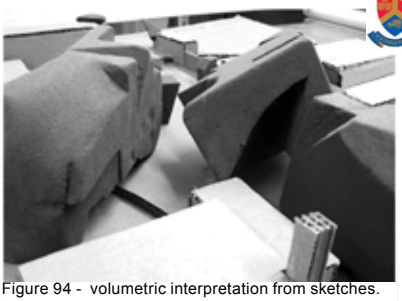


Figure 94 - volumetric interpretation from sketches.

Figure 98 - volumetric interpretation from sketches.

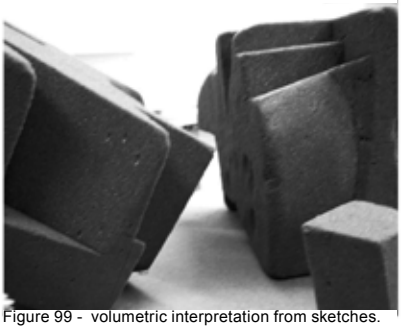


Figure 99 - volumetric interpretation from sketches.

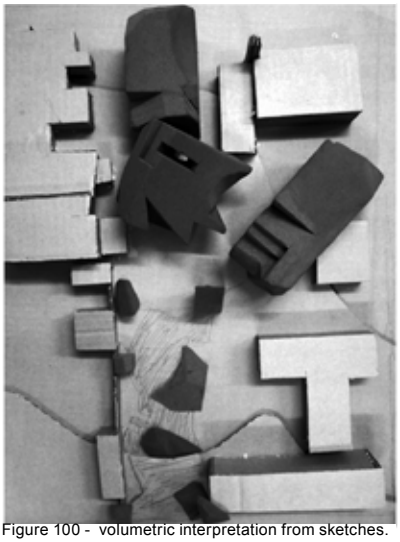


Figure 100 - volumetric interpretation from sketches.

Figure 95 - interpretation of model.

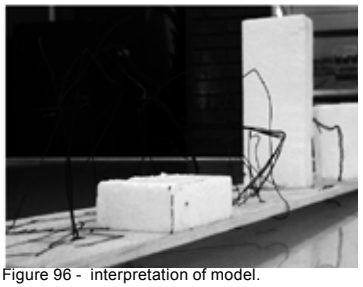


Figure 96 - interpretation of model.

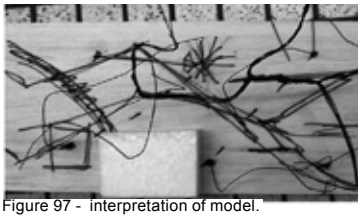


Figure 97 - interpretation of model.

Placement – two main elements; framing the church.

Scale – imposing.

Spatial – openings between buildings; exciting urban qualities

Movement – not that well defined; around buildings.

Relationship – contrasting and emphasizing; uncomfortable.

Amadoda was utilised similar to the two previous experiments to generate volumetric forms and spaces. This African piece has an uncomfortable feel about it with stop start explosive movements. Amadoda was performed by classically trained dancers and acts as a good example of how the contemporary utilises the ‘classical’. This was interpreted into abstract rigid forms that define similar segmented spaces.

Figure 101 - scene from cage and cunningham used as generator.

Figure 103 - scene from cage and cunningham used as generator.

Figure 104 - scene from cage and cunningham used as generator.

cage/cunningham: a film by elliot caplan

choreography by Merce Cunningham

Cage/Cunningham is a documentary film about the life of John Cage and Merce Cunningham with selected performance segments from some of their more famous music composition and choreography work respectively. Performed by students of the Merce Cunningham's company and stretches over a period of 50 years.

Figure 102 - interpretive sketch by author.

Figure 105 - interpretive sketch by author.

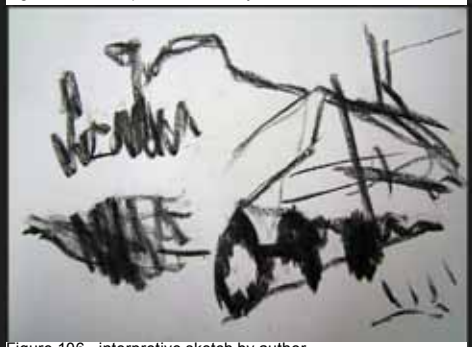


Figure 106 - interpretive sketch by author.

Figure 107 - interpretive sketch by author.

Figure 108 - volumetric interpretation of sketches.

Figure 109 - interpretation of model.

Figure 110 - interpretation of model.

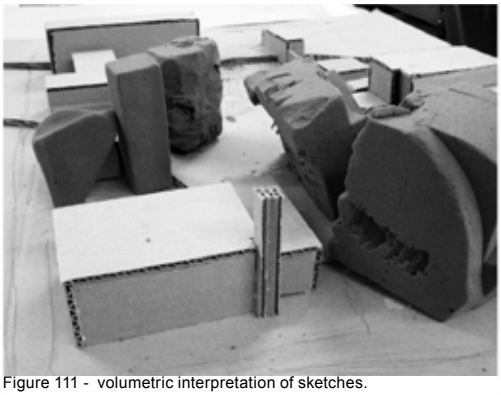


Figure 111 - volumetric interpretation of sketches.

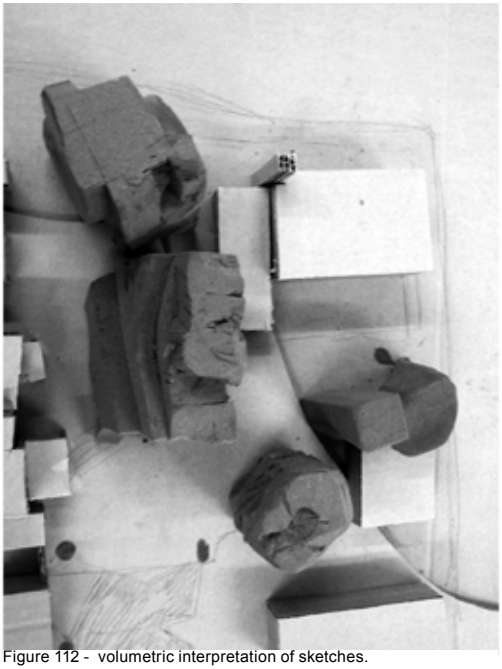


Figure 112 - volumetric interpretation of sketches.

Placement – separate elements; In between church and Unisa Little Theatre.

Scale – imposing.

Spatial – exciting urban qualities.

Movement – route defined as in between buildings.

Relationship – contrasting and emphasizing.

Cunningham's choreography is a maze of movement that forms a whole. The choreography consists of sharp, explosive, stop start and random movements. Thus generating in a fascinating way a beautiful composition that is not immediately grasped. The author interpreted it into fragmented lines, dots and objects that have a sense of discomfort about them but are part of a larger portion.

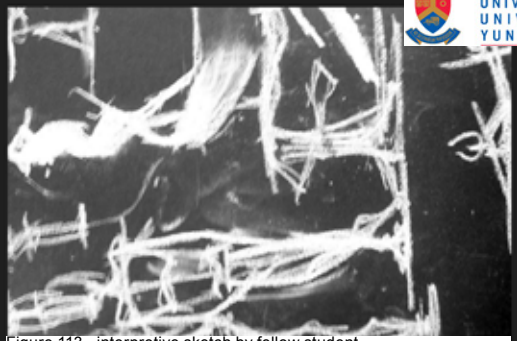


Figure 113 - interpretive sketch by fellow student.

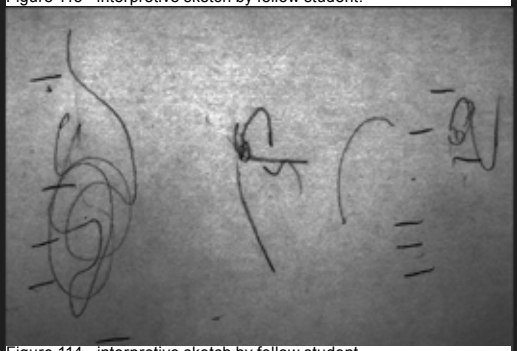


Figure 114 - interpretive sketch by fellow student.

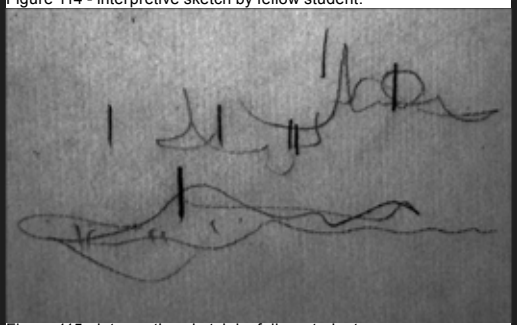


Figure 115 - interpretive sketch by fellow student.


Figure 116 - interpretive sketch by fellow student.

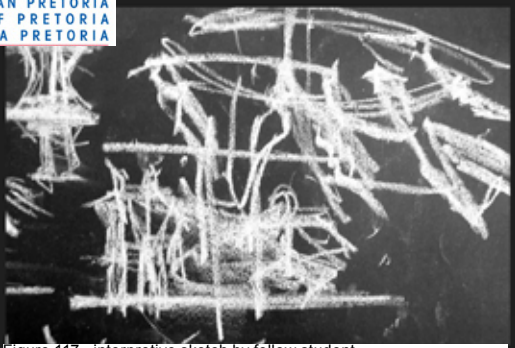


Figure 117 - interpretive sketch by fellow student.

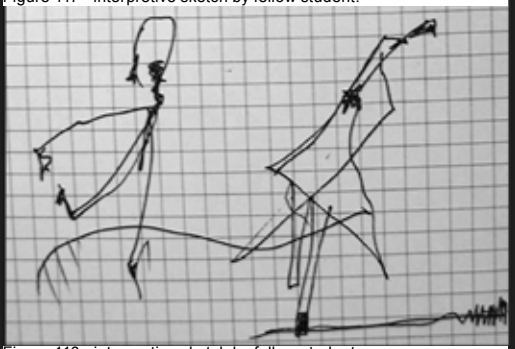


Figure 118 - interpretive sketch by fellow student.

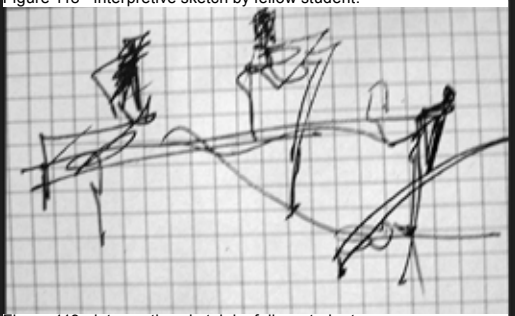


Figure 119 - interpretive sketch by fellow student.


Figure 120 - interpretive sketch by fellow student.

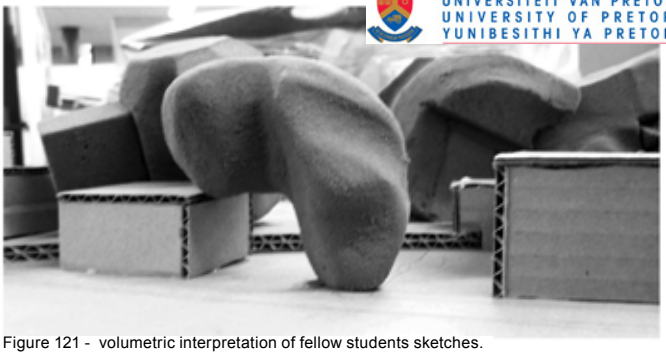


Figure 121 - volumetric interpretation of fellow students sketches.

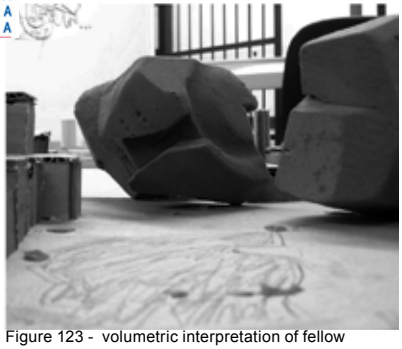


Figure 123 - volumetric interpretation of fellow students sketches.

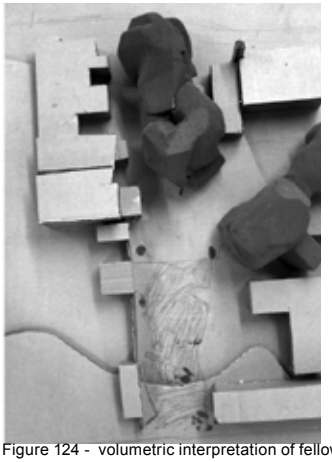


Figure 124 - volumetric interpretation of fellow students sketches.

other views

For this experiment fellow students attended a production by the Tshwane University of Technology Dance Department at the Breytenbach Theatre. They were asked to interpret what they see into sketches. This resulted in a diverse range of interpretations (see figures 110-117) concluding that the image is perceived and expressed differently.

The process followed with the previous experiments was repeated after receiving these images. The result was different as it was a combination of four interpretations rather than one. This combination of graceful and rigid interpretations resulted in objects on site which speak the same language.

Figure 122 - interpretation of model.

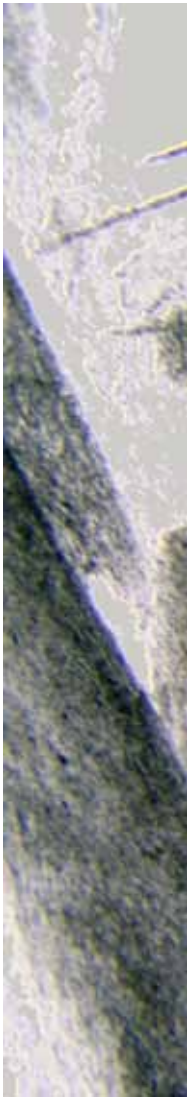
consolidation from experiments

The number of exercises could be increased and or the variations further explored, but time constraints did not allow this luxury. Furthermore, selection and final interpretation would prove more difficult than expected, but the results from these five experiments proved to be inspiring.

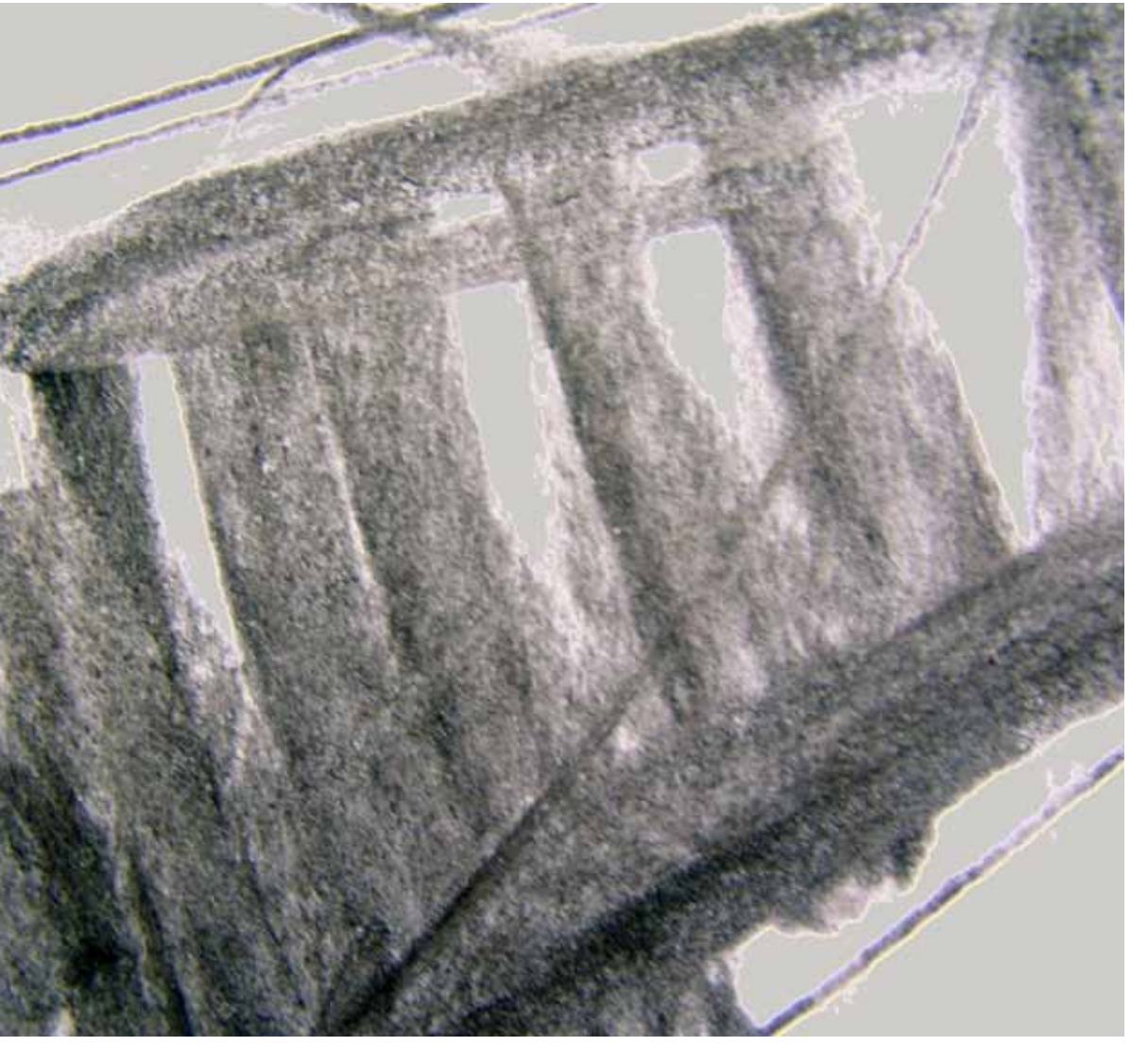
The exercises of interpretive sketching were distinguishable according to performance. On sketch level different images and moods were portrayed. The flow of Black and White was portrayed as elegant movement; Amadoda gave the impression of explosive, sharp and rigid movements; whereas the combination of Cunningham's choreography and Cage's composition presented an abstract and intriguing mood.

Upon completing various interpretations a distinguishable pattern emerged with regard to placement of objects and movement through the site which informed the urban design of the proposed project (see chapter five). This pattern was consequently influenced by the characteristics of the site as discussed in chapter three. The diversity of the pieces chosen resulted in a set of rewarding design conclusions.

The building position, fragmentation, scale, spatial relationships between existing and new surfaces, and movement routes were the main focal elements concluded from the explorations. Every experiment added some degree of value to the design process and became a part of the final design on both urban and building scale.



chapter 05 Urban design



introduction

This chapter attempts to integrate the site analysis (the 'real') with the experiments (the 'fantasy'). On an urban scale the experiments generated the movement routes, the placement and scale of the buildings, and the landscaped areas which define the outside performance areas.

The urban design is based on the student urban framework entitled SchizoCity. As mentioned in chapter 3, it proposes to 'cut' through the existing city blocks and add a second layer of movement onto the existing.

Aspects of urban design generated the proposed development in part. This extends to the landscape surrounding the design proposal. The integration of architecture, landscape architecture and urban design is an essential exercise during the creation of space.

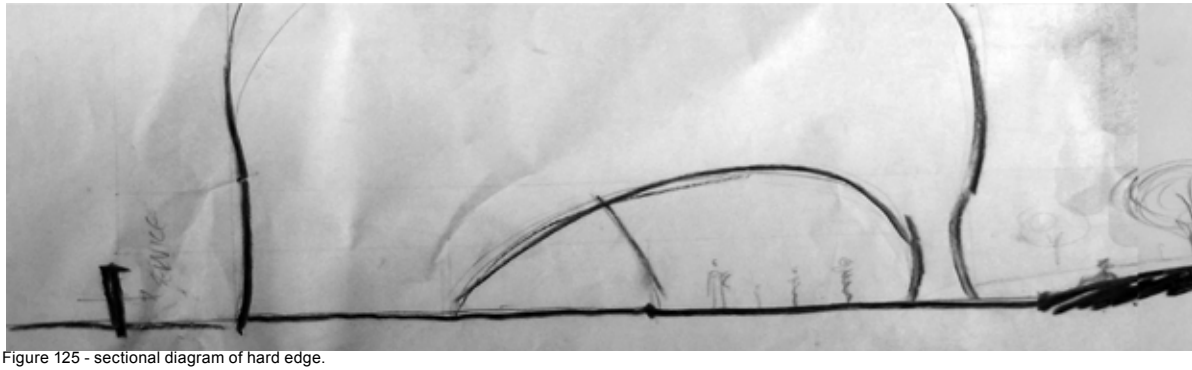


Figure 125 - sectional diagram of hard edge.

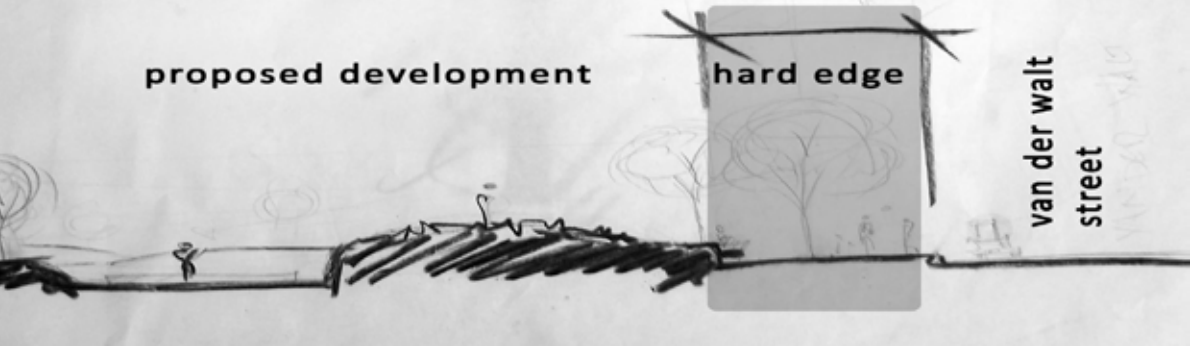
To assist with the final design process a set of basic urban design guidelines which act as restraints had to be developed. These guidelines are based on a combination of the SchizoCity framework and established urban design principles. They form a base onto which the proposed buildings can be placed. These guidelines are:

- The existing temporary structures on the corner of van der Walt and Visagie Streets are to be demolished (see figure 126).

Figure 126 - diagram indicating temporary structures to be demolished.

- Strong street edges have to be defined. This is more relevant to the streets running in a North South direction mainly on van der Walt street. This strong edge would ensure that the proposed pedestrian movement does not compete with the existing movement rather creating a symbiotic relationship (see figure 127).

Figure 127 - diagram indicating the implementation of strong street edges.



- A secondary crossing over Visagie Street is provided for pedestrian movement. This will consist of a raised street level and a change in surface. The purpose is to slow down traffic and allow easy pedestrian crossing. The vehicle user could also observe the proposed intervention (see figure 128).

Figure 128 - diagram indicating pedestrian crossing over visagie street.

- The tallest structure, a ten story apartment building, in the area is located on the South West corner of the site. This vertical edge determines the positioning of the landscaped area (see figure 129).

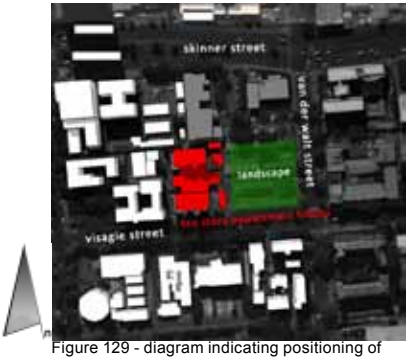


Figure 129 - diagram indicating positioning of the main landscaped area.

- The street block between Visagie Street and Burger Park Street is opened between the Doxa Deo Church and the Yeast housing. This is proposed in an attempt to extend the green ‘fingers’ and atmosphere of Burgers Park into the city (see figure 130).

Figure 130 - diagram indicating pedestrian movement cutting through the city block.

existing versus the new

In a similar fashion as contemporary dance builds on classical dance (see chapter 2), the project superimposes on the existing. The two buildings of note within this context are: the Unisa Little Theatre and the St. Peters – Evangelic Lutheran Church. This is attempted on a spatial level and unintentionally on an aesthetic level. The result of this is a celebrated contrast similar to the New Scottish Parliament in Edinburgh, and the Kunsthaus in Graz.

Figure 131 - diagram indicating the overlaying of the contemporary and the classical.

With both these examples a clear contrast between the existing and the new is achieved. This contrast is on an aesthetic as well as spatial level. While visually seeming out of place these two projects, however, react well with their existing environment. A large part of the success of these projects are attributed to their ground floor levels and their relationship to the street.

The New Scottish Parliament, Edinburgh, Scotland, by the Spanish firm Miralles/ Tagliabue-EMBT, was inaugurated in October 2004. In 2005 this project received a number of awards among them the RIBA Stirling Prize, the RIAS Andrew Doolan Award for Architecture and a Scottish Design award. The combination and relationship of building and landscape ('land') became a significant factor of the design (Internet: Mirallestagliabue, 2009).

"We hope that from this emerges a series of identifications between the building and the land, land and citizens, citizens and the building, not just because of an "image"…" (Miralles & Tagliabue).

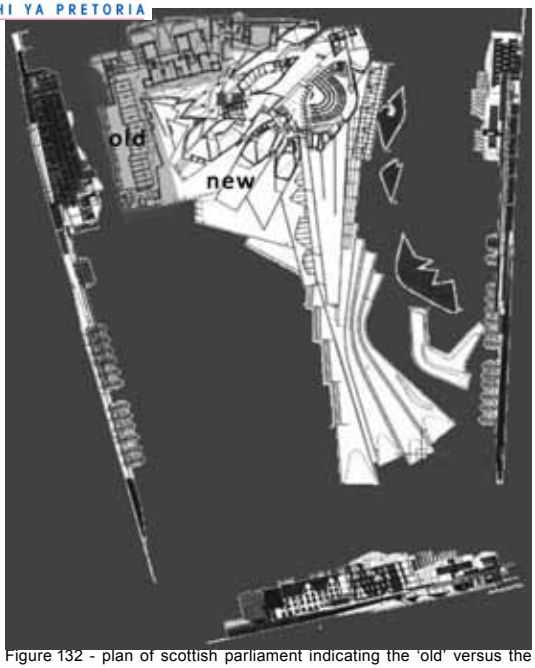


Figure 132 - plan of scottish parliament indicating the 'old' versus the 'new.

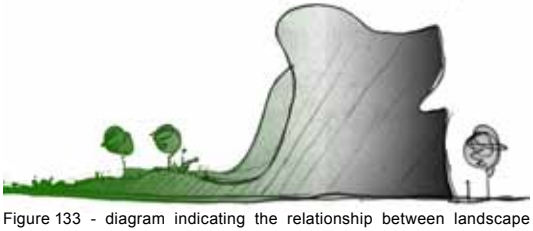


Figure 133 - diagram indicating the relationship between landscape (land) and building.

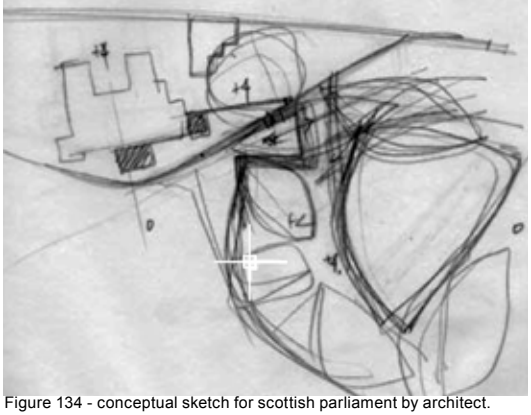


Figure 134 - conceptual sketch for scottish parliament by architect.

Figure 135 - image of scottish parliament with 'old' versus 'new' indicated.

The Kunsthaus Graz, the Grazer Kunsthaus or the Graz Art Museum, Graz, Austria, was design by the London based architectural firm Spacelab and completed in 2003. The two main architects on the project were Peter Cook and Colin Fournier. The project was a competition winning entry and is best summed up by a nickname given to it by the main architects, 'the friendly alien' (Internet: Gernot.xarch, 2009).

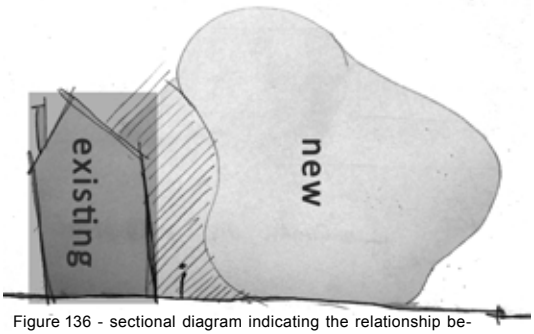


Figure 136 - sectional diagram indicating the relationship between existing and new ('alien').

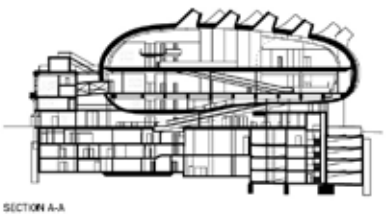


Figure 137 - plans and section of Kunsthaus with 'old' versus 'new' indicated.

Figure 138 - image of Kunsthaus.

Figure 139 - image of Kunsthaus.

proposed performance areas

A number of new performance areas will be added to site. The diversity of these areas is important in challenging and facilitating the contemporary choreographer. With the proposed intervention the site will present a variety of performance spaces:

Soft landscape that will consist of grass lawns and shrubs.

Hard landscape or square which can accommodate a range of activities.

Two open air stages. One on ground floor level, the other one story up overlooking the square.

Two studios, which hosts the permanent occupants of the Contemporary Dance Company. These studios expose the process of dance to the city dweller. The one studio on the North side for the vehicle user and the other studio submerged on the squares side for the pedestrian.

The main contemporary performance area consists of a 'Black Box' theatre. This is the more formalised performance area.

The existing, 'classical', Unisa Little Theatre on the North West side of the site.

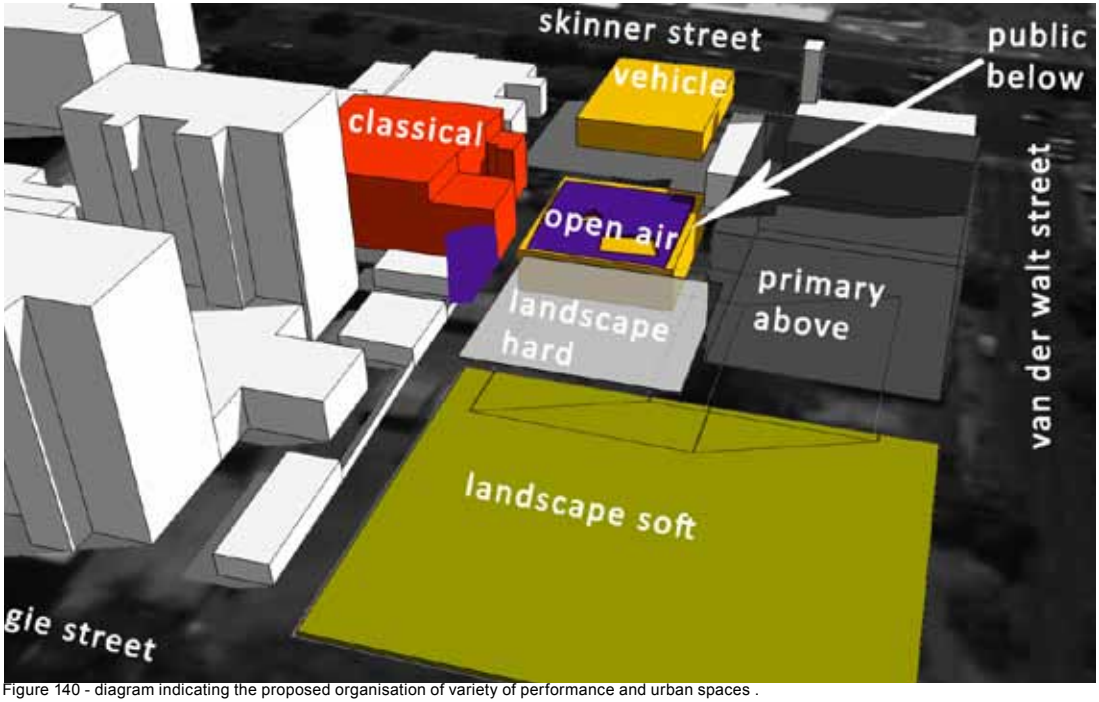


Figure 140 - diagram indicating the proposed organisation of variety of performance and urban spaces .

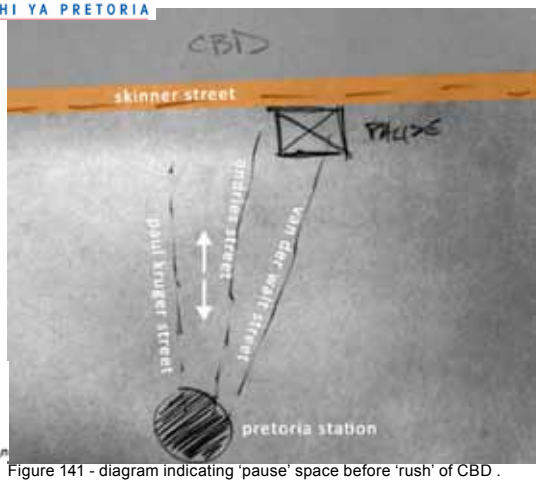


Figure 141 - diagram indicating 'pause' space before 'rush' of CBD .

summary

Soft and hard landscaping are employed to establish a 'pause' space within the CDB (see figure 141). This is supplemented by an active ground floor in the form of an eatery (see figure 142). The primary pedestrian movement is envisioned through the site as indicated in figure 143.

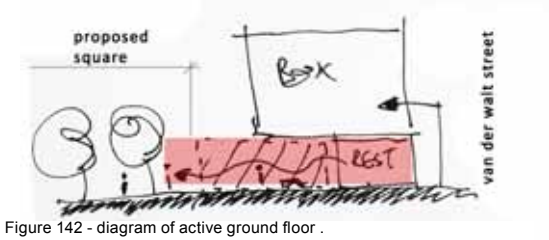


Figure 142 - diagram of active ground floor .

Soft and hard landscape culminates in the square as 'pause' area. The proposed project connects with pedestrian movement on van der Walt Street. A secondary pedestrian movement from the square passing the Unisa Little Theatre towards Skinner Street, is made available.

The ground floor levels of the proposed buildings and the way they react with their surroundings, existing and new, is of importance for the success of the intervention.

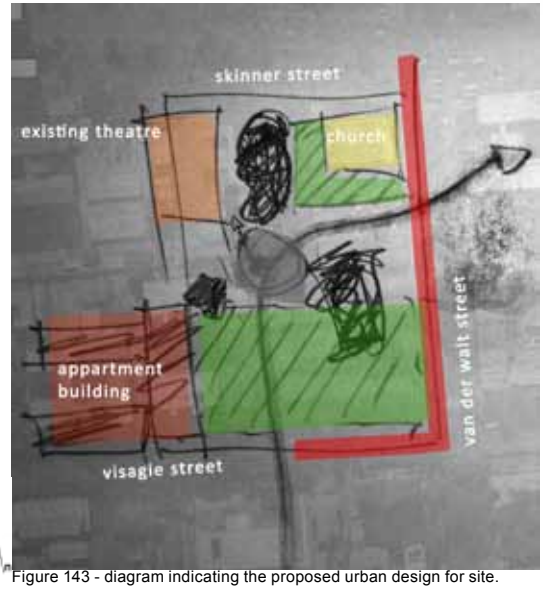


Figure 143 - diagram indicating the proposed urban design for site.

chapter 06 design development

introduction

With the merging of the ‘reality’ and the ‘fantasy’ the scale gains more prominence. The relationship between the existing and the new, the various programs, the arrangement of these on site and their specific needs is investigated. The design process is focused on delivering a conceptual design.

the existing

Three important existing structures (on and around the site) influenced the proposed development:

- The Unisa Little Theatre.
- The St. Peters – Evangelic Lutheran Church.
- The ten storey apartment building on the South West corner.

Figure 144 - diagram indicating relevant existing buildings.

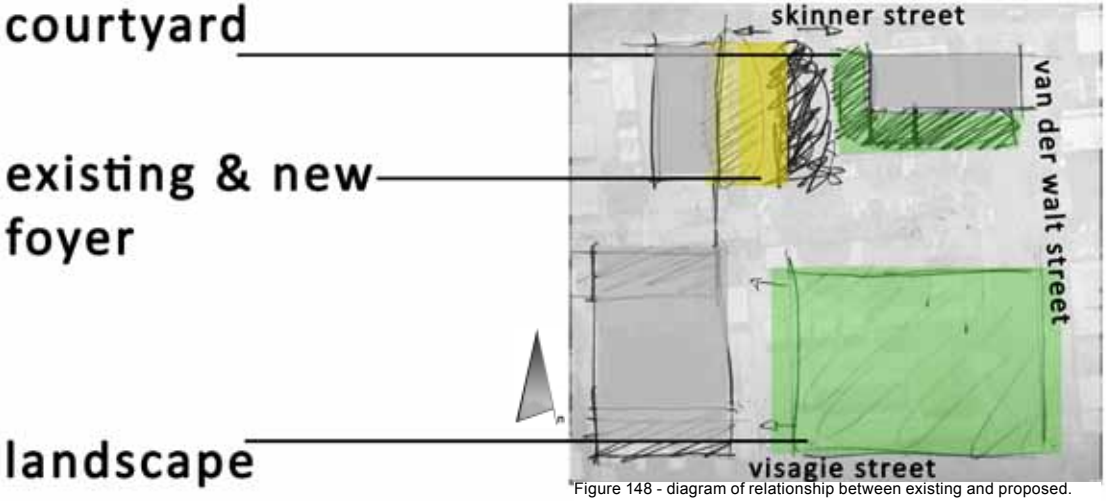


Figure 148 - diagram of relationship between existing and proposed.


Figure 145 - image of St. Peters – Evangelic Lutheran Church.


Figure 146 - image of Unisa Little Theatre.


Figure 147 - image of residential blocks.

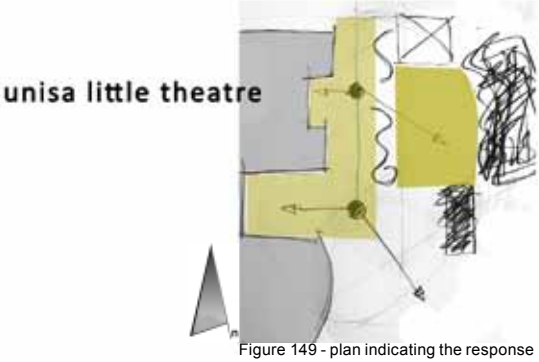


Figure 149 - plan indicating the response with the Unisa Little Theatre.

Figure 150 - section indicating the response with the Unisa Little Theatre.

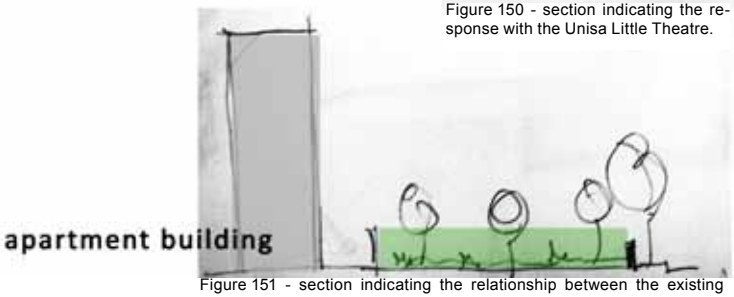


Figure 151 - section indicating the relationship between the existing apartment building and the proposed landscape.

programmes on site

The proposed project hosts a Contemporary Dance Company, an eatery, a variety of performance areas and a public square.

The proposed Contemporary Dance Company building will be situated in between the Unisa Little Theatre and the St. Peters – Evangelic Lutheran Church.

The building will form a solid edge on the North side (Skinner Street) of the site with a semi-private entrance for the users of the building as well as the Unisa Little Theatre (see figure 152). On the East side the building defines the existing court yard of the Church (see figure 152).

The Contemporary Dance Company consists of 30 to 40 dancers with 4 to 5 permanent staff members. These staff members will be accommodated in a more private area of the building complex. The building is situated on the edge of the main proposed movement and is thus defined as a semi public building (see figure 153).

On ground floor the programme accommodates the administrative component. The upper floor remains as dancer 'domain' with studio's and dressing rooms. The main studio is sunken to basement level, below public movement. This allows for observation without distracting the performers (see figure 153).

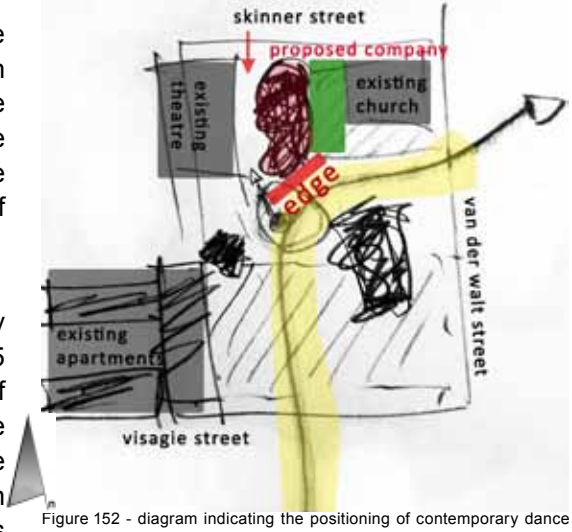


Figure 152 - diagram indicating the positioning of contemporary dance company.

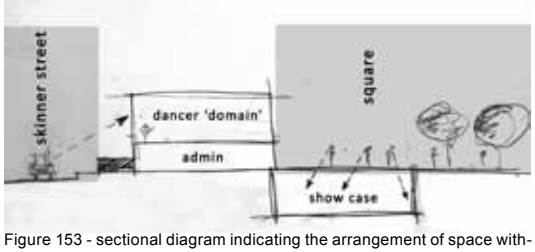


Figure 153 - sectional diagram indicating the arrangement of space within the contemporary dance company.

The performance areas provide a variety of options for the choreographer. It ranges from open air stages to the main ‘Black Box’ performance theatre, as seen in previous figure 138, page 70. The ‘Black Box’ Theatre will consist of an eatery on ground floor and performance area, front and back of house on the upper levels (see figure 154).

The performance areas were carefully designed not to compete with the existing ‘Classical’ Unisa Little Theatre. It attempts to add more diversity on the terrain with regard to performance spaces. The concept of the ‘Black Box’ represents an empty void which allows the space to be utilised in a variety of ways. Stages, seating, lighting and sound are all temporary and can be moved and changed as required.

This building defines the pedestrian movement through the site on the East side (see figure 154). It is placed in the landscape and parallel with the North South pedestrian movement.

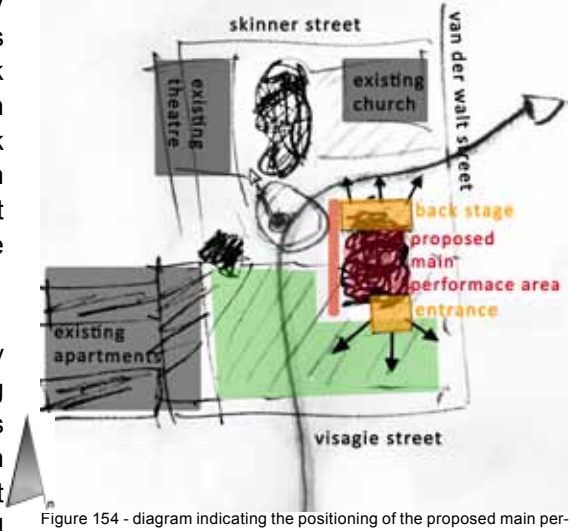


Figure 154 - diagram indicating the positioning of the proposed main performance area.

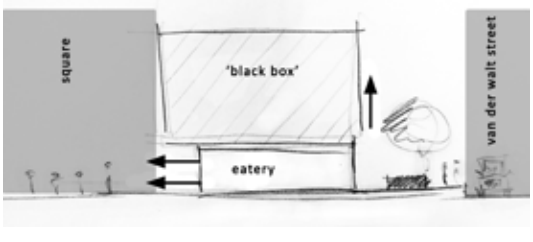


Figure 155 - sectional diagram indicating the relationship between the proposed main performance building and the site.

Back stage (back of house) and theatre administration is placed on the North side of the building with the entrance and foyer area (front of house) on the South side facing towards the landscape (see figure 155). The performance area is moved to the upper level to create space for an active edge on ground floor in the form of an eatery (see figure 156).

A similar unconventional arrangement of the three major elements for a theatre, performance area (chamber), and front and back of house is the Wyly Theatre in Dallas, USA. This theatre was designed by the architectural firm of REX/OMA and completion is expected in 2009. The typical arrangement of these elements has been reinterpreted to adapt to the site and budget (see figure 15).

Figure 156 - sectional diagram indicating the back and front of house, performance area and eatery in relation to public environment.

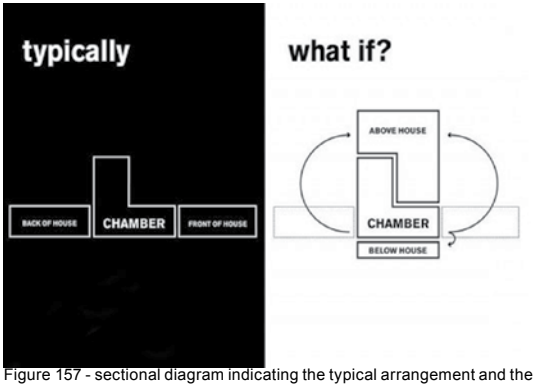


Figure 157 - sectional diagram indicating the typical arrangement and the proposed arrangement of the Wyly Theatre, Dallas.

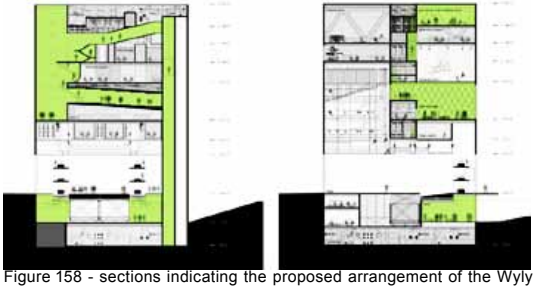


Figure 158 - sections indicating the proposed arrangement of the Wyly Theatre, Dallas.

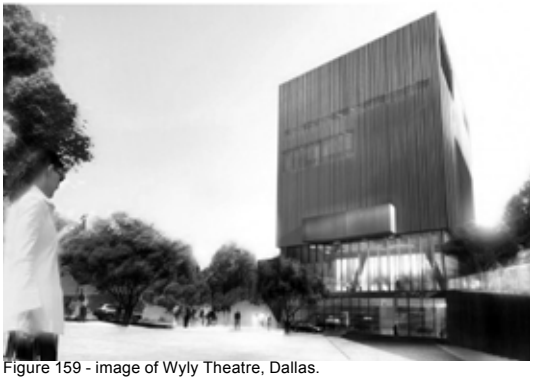


Figure 159 - image of Wyly Theatre, Dallas.

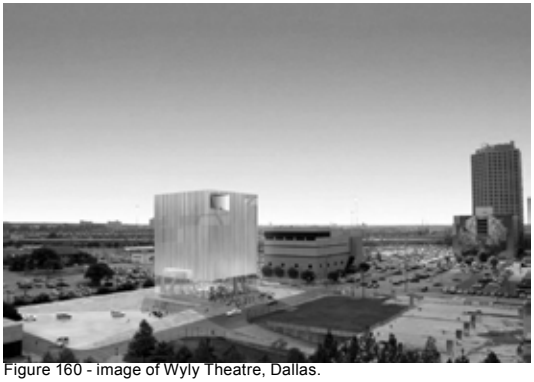


Figure 160 - image of Wyly Theatre, Dallas.

the process

The experiments described in chapter 4 generated a series of lines, forms and spaces and were interpreted into a design. This task proved arduous, because of the number and variation of options made available. Throughout the whole design process these elements were referred to and sculpted to establish the design.

Figure 161 - diagram of lines generated from sketches in chapter four placed on site.

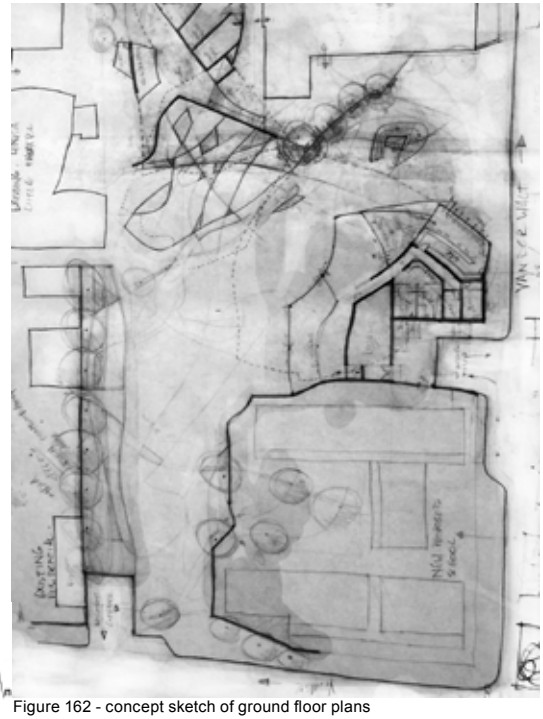


Figure 162 - concept sketch of ground floor plans

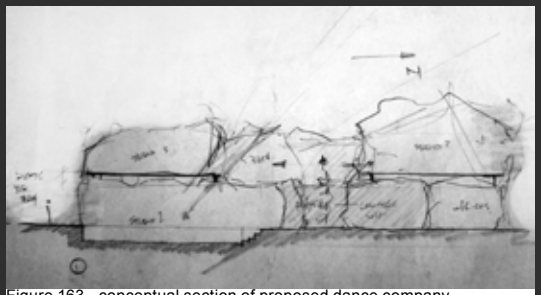


Figure 163 - conceptual section of proposed dance company.

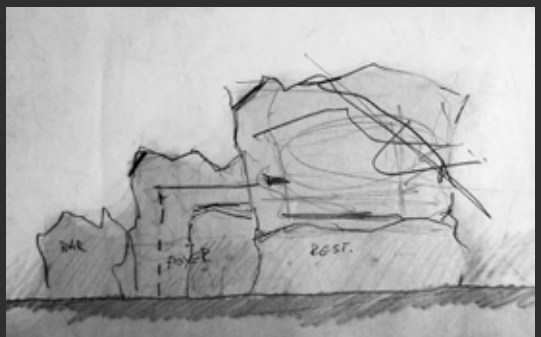


Figure 164 - conceptual section of proposed 'black box' performance area and eatery.

Figure 165 - perspective of proposed movement through site in relation to the proposed contemporary dance company.

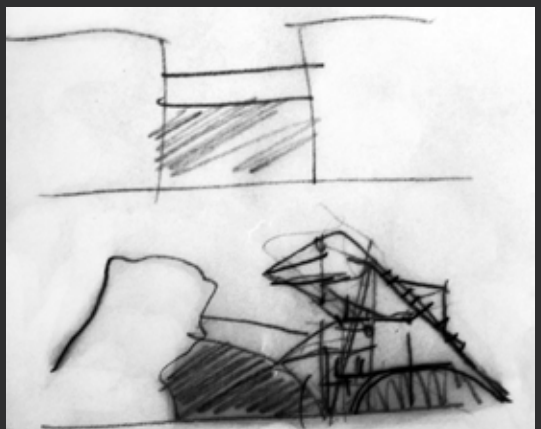


Figure 166 - diagram exploring the spatial relationship between two or more buildings.

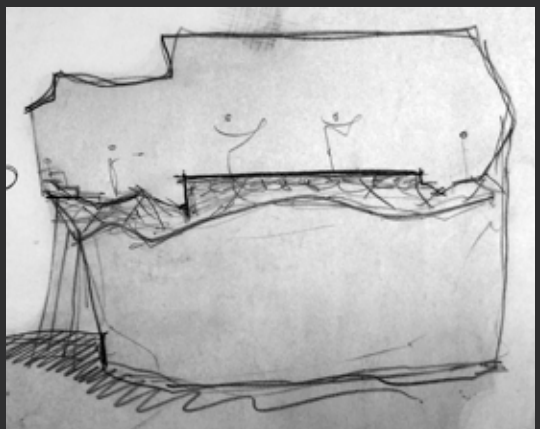


Figure 167 - sectional diagram exploring studio space and floor surface.

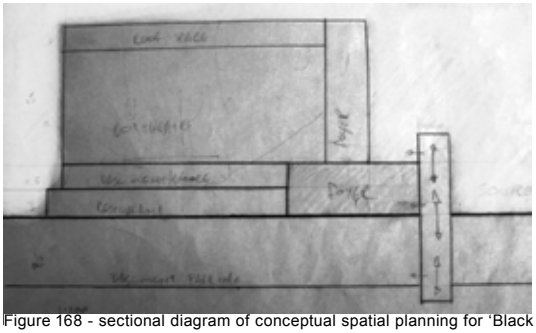


Figure 168 - sectional diagram of conceptual spatial planning for 'Black Box' theatre.

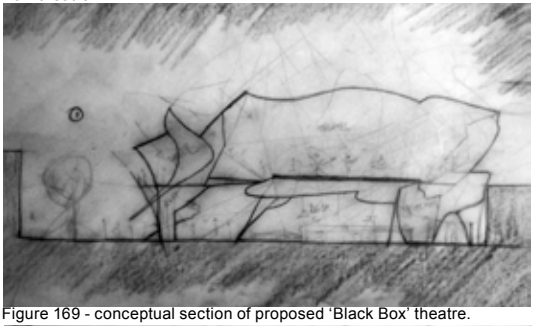


Figure 169 - conceptual section of proposed 'Black Box' theatre.

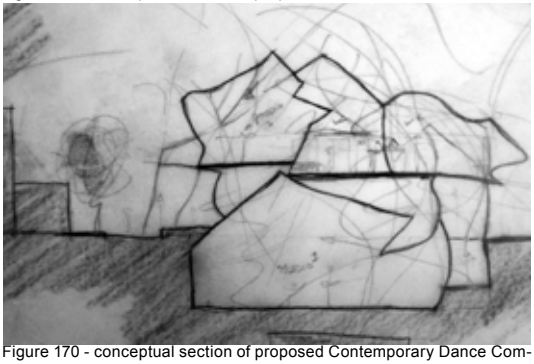


Figure 170 - conceptual section of proposed Contemporary Dance Company.

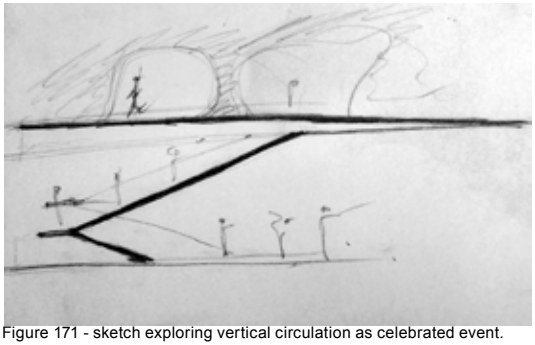


Figure 171 - sketch exploring vertical circulation as celebrated event.

Conceptual sections and plans of the two proposed buildings were generated from the experiments. This process was done with the basic requirements of site and programme in mind. Some examples are figures 169, 170 and 173.

Figure 172 -conceptual sketch of ground floor plans and site layout.

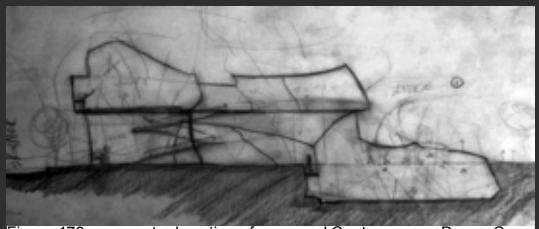


Figure 173 - conceptual section of proposed Contemporary Dance Company

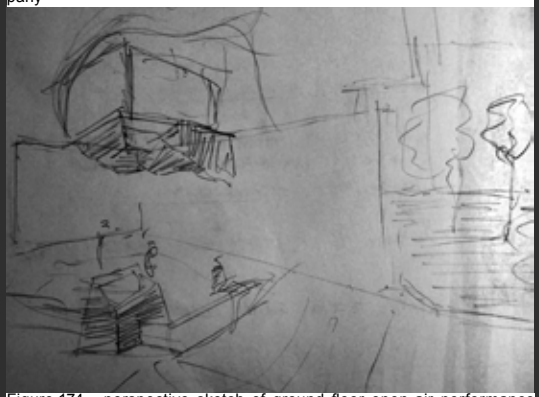


Figure 174 - perspective sketch of ground floor open-air performance stage

Figure 175 - perspective sketch of outside performance space and pedestrian movement in between the Unisa Little Theatre and the proposed Contemporary Dance Theatre.

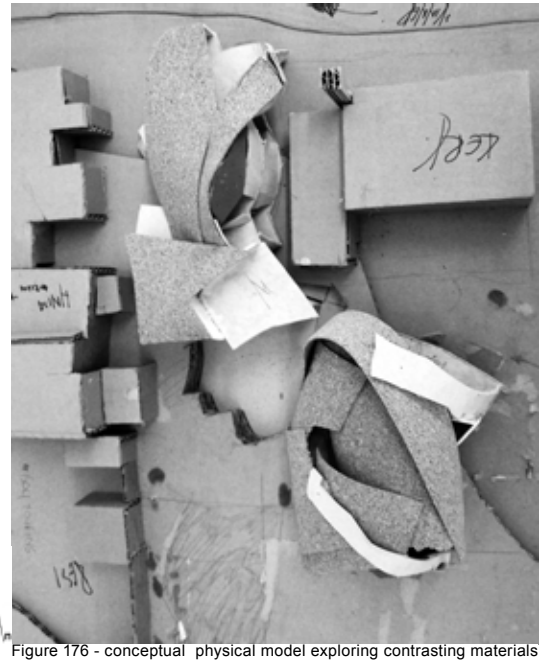


Figure 176 - conceptual physical model exploring contrasting materials and tectonics.

A number of conceptual physical models were built during the design process. One of the two most prominent models was used to explore the possibilities for the use of contrasting materials and tectonics. This contrasting exploration was done for the new proposed buildings in isolation as well as within context (see figures 176 and 177).

Figure 177 - conceptual physical model exploring contrasting materials and tectonics.

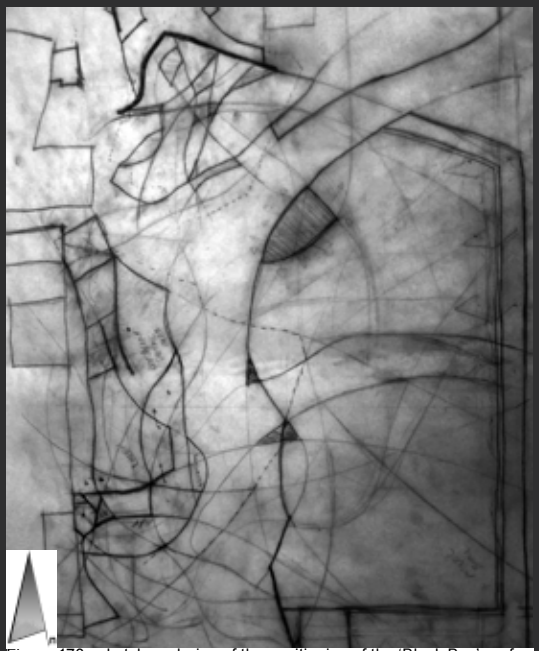


Figure 178 - sketch exploring of the positioning of the 'Black Box' performance space on the south west corner of the site.

Figure 179 - conceptual exploration of ground floor plans and site layout for both new proposed buildings.

Figure 180 - sketch exploring of the positioning of the 'Black Box' performance space on the south west corner of the site.

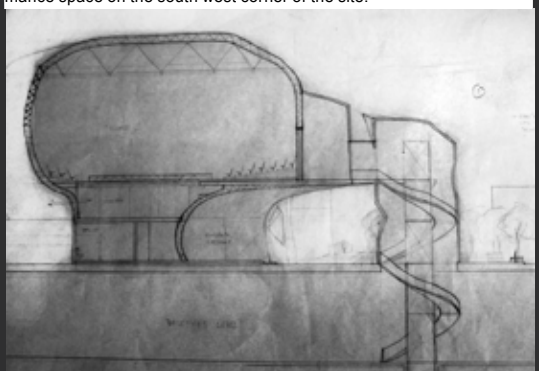


Figure 181 - conceptual section exploring vertical movement from basement to ground floor and front of house.

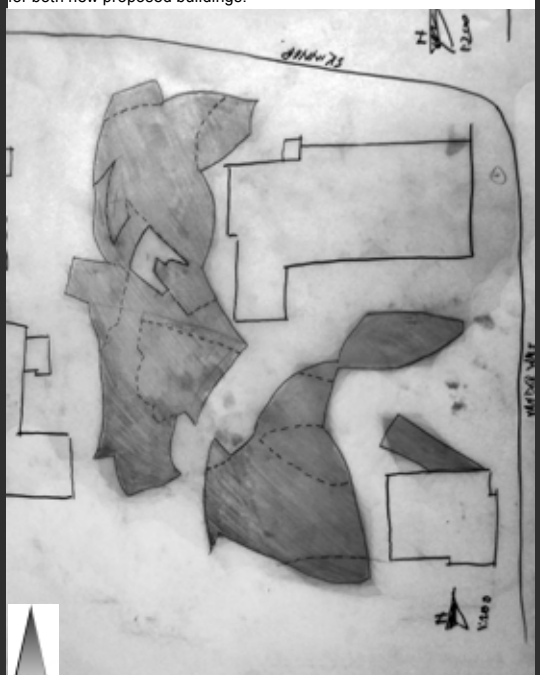


Figure 182 - conceptual exploration of upper floor plans and site layout for both new proposed buildings.

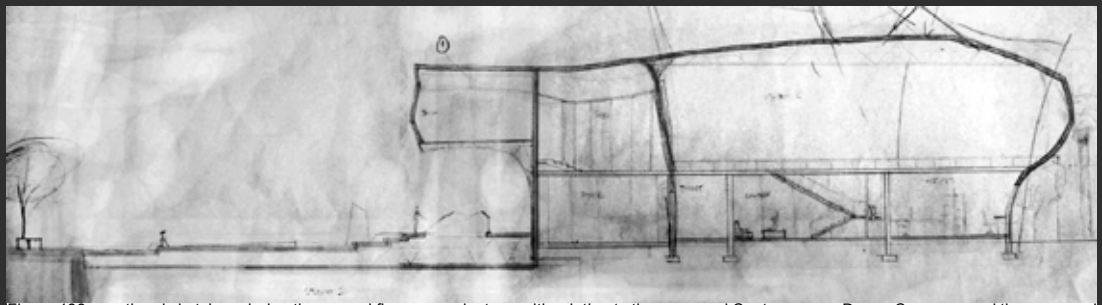


Figure 183 - sectional sketch exploring the ground floor open air stage with relation to the proposed Contemporary Dance Company and the proposed public square.

Figure 184 - section exploring the relationship between the existing Unisa Little Theatre and the proposed Contemporary Dance Company.

Figure 185 - sectional sketch of proposed landscape and hard edge.

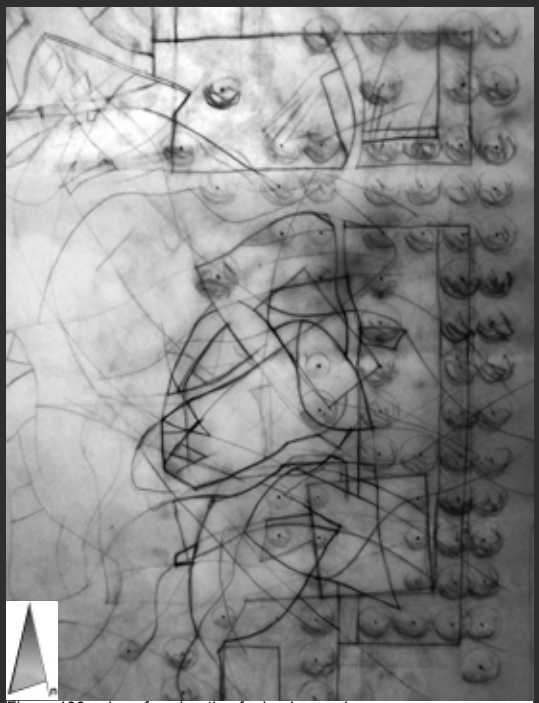


Figure 186 - plan of exploration for landscaped area.

The other prominent physical model was a reduction of contrasting materials and tectonics. The model was built from modeling clay. This material simplified the sculpting process and advanced the search for desired shapes. Scale and relationship between elements on site could also be explored with the constructing of both physical models.

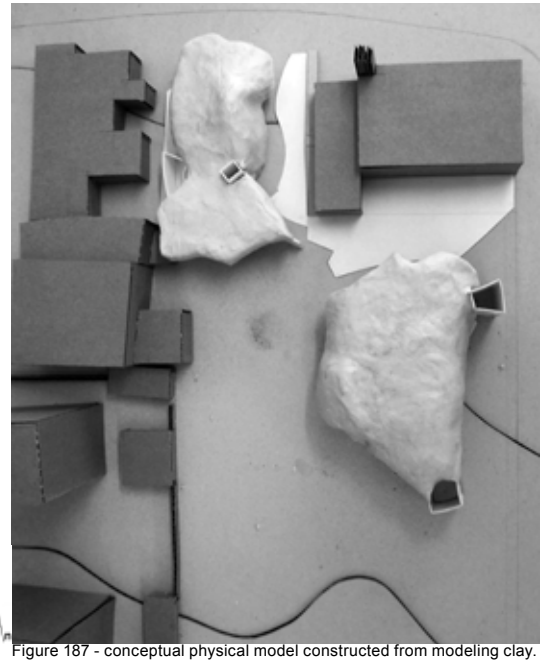


Figure 187 - conceptual physical model constructed from modeling clay.

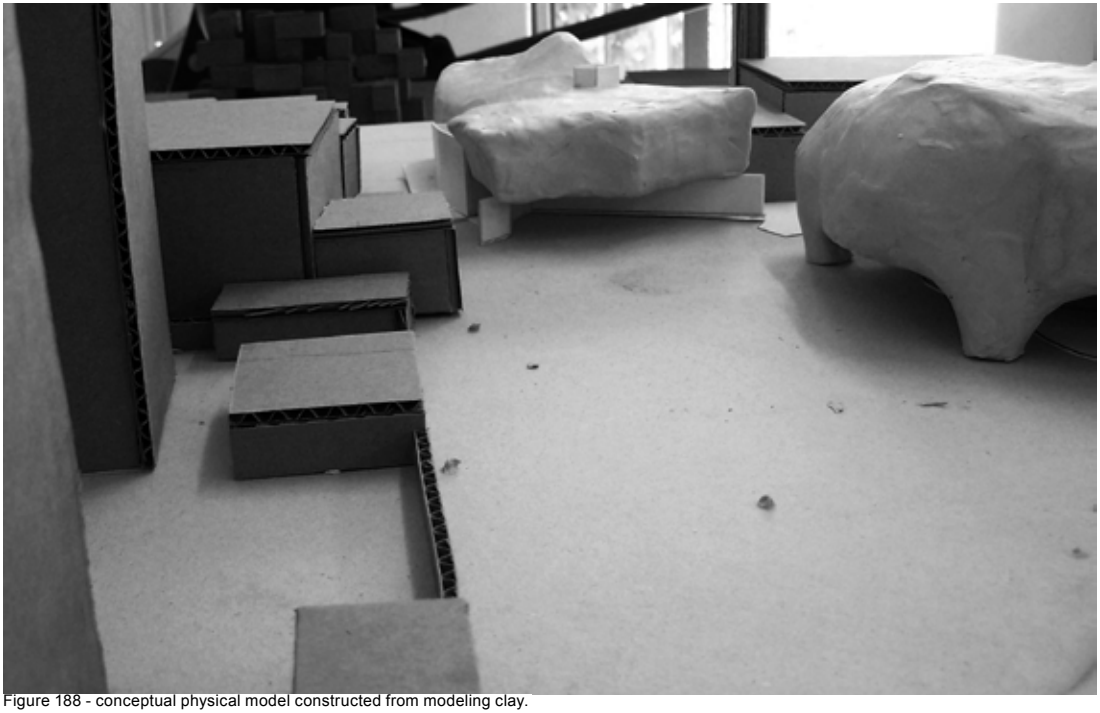


Figure 188 - conceptual physical model constructed from modeling clay.

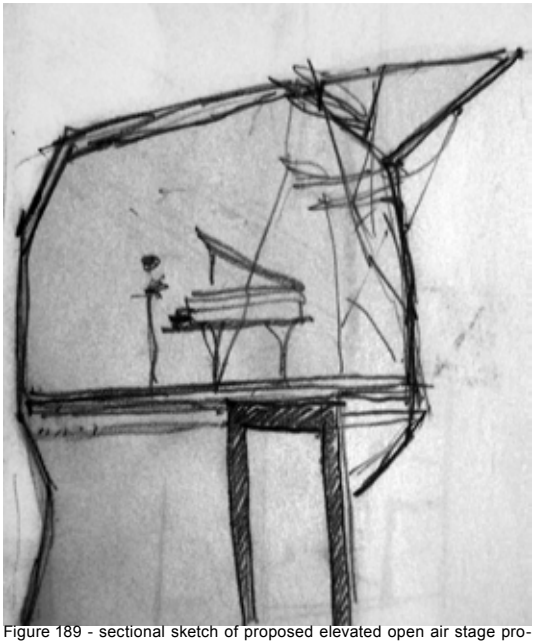


Figure 189 - sectional sketch of proposed elevated open air stage projecting onto the public square.

Vertical circulation from the proposed two level basement parking onto the public square is provided. Extending this structure defines the elevated open air stage. This stage projects onto the public square and could host a number of events such as: drama productions, poetry recitals and live music.

Figure 190 - perspective of proposed focal point when approaching the public square from Visagie street side.

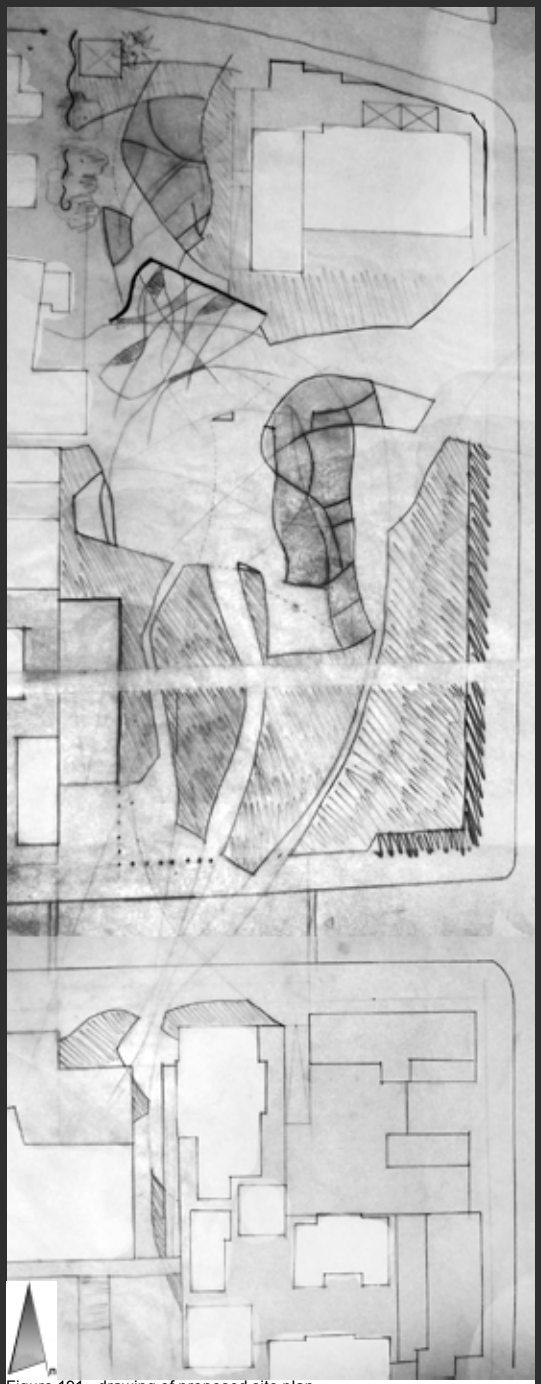


Figure 191 - drawing of proposed site plan.

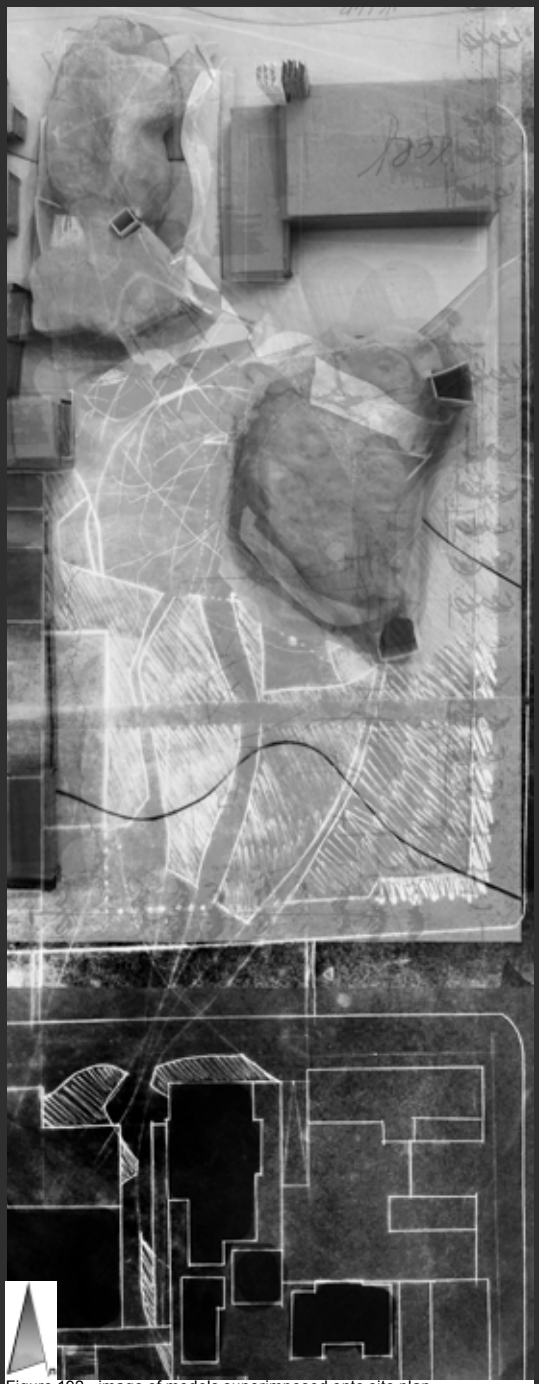


Figure 192 - image of models superimposed onto site plan.

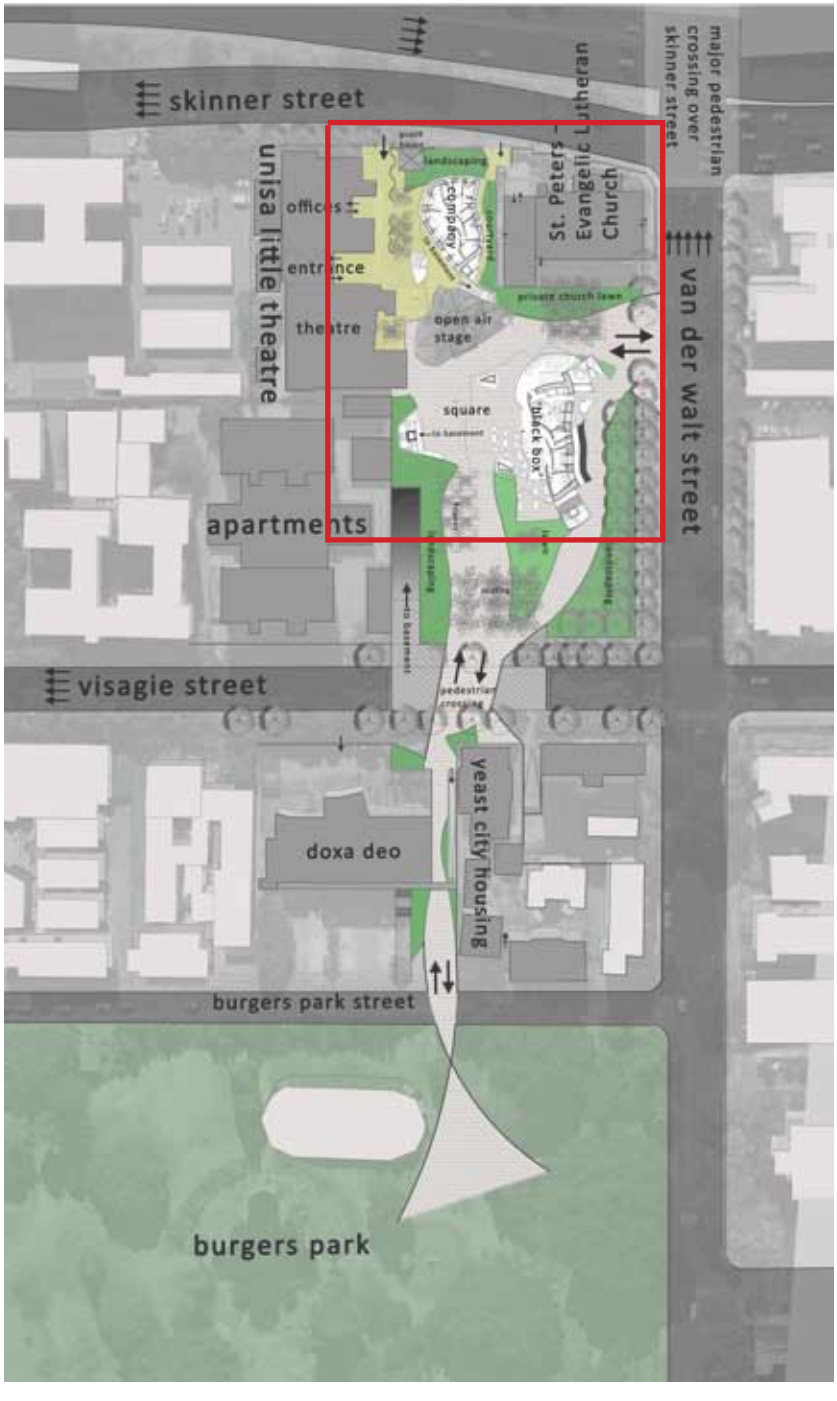
Figure 193 - perspective drawing of proposed intervention viewed from the south.

summary

The design process proved challenging and rewarding and was stimulated by an intuitive response. A deliberate effort was made to increase intuition (the ‘fantasy’) as part of the process. However, the ‘real’ and pragmatic were ever present during the decision making process and influenced the design to various degrees.

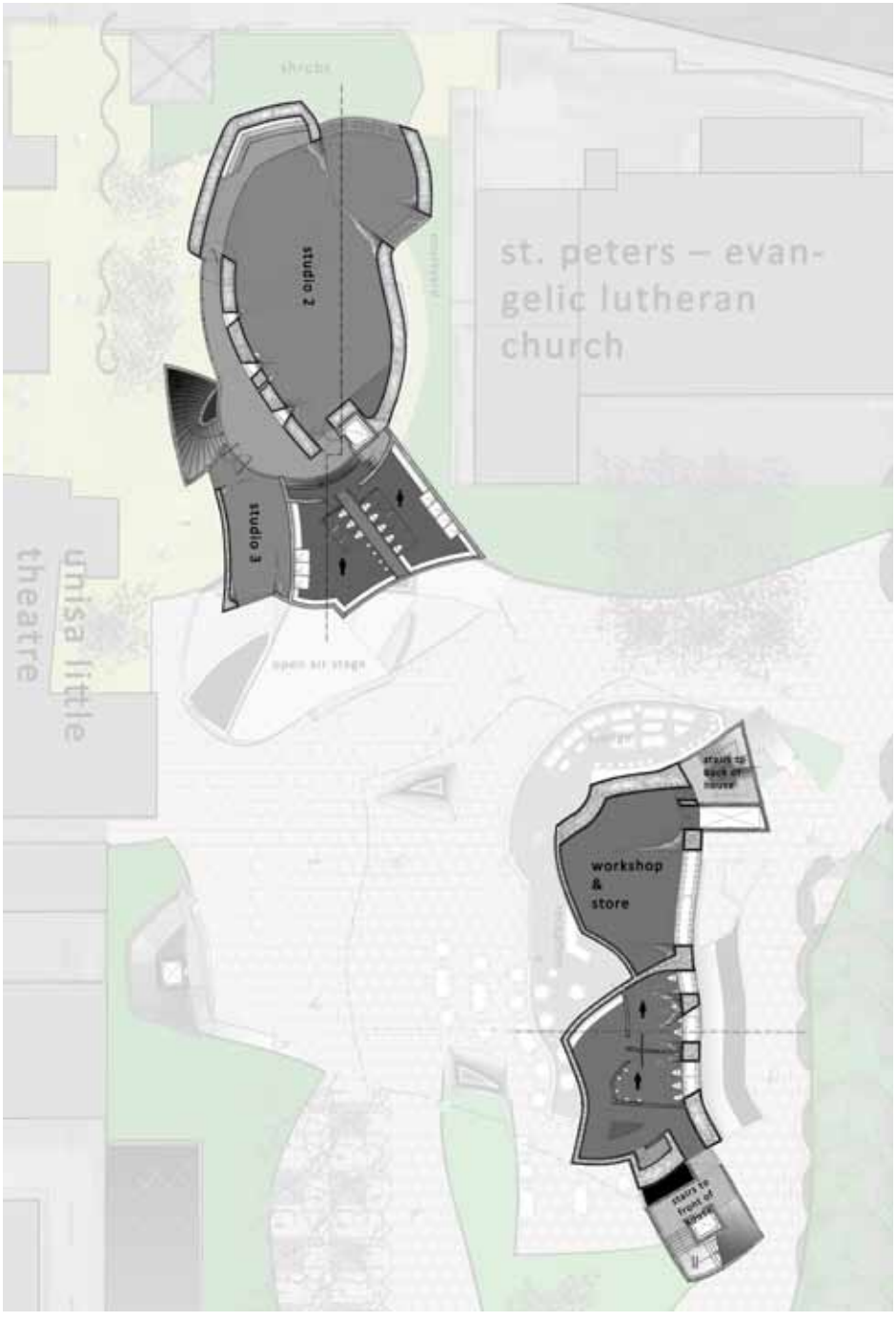
“Our more optimistic goal was to enrich architecture by expanding and upgrading our grasp of the sources it can draw upon” (Bos & Berkel, 2006: 012).

sketch design

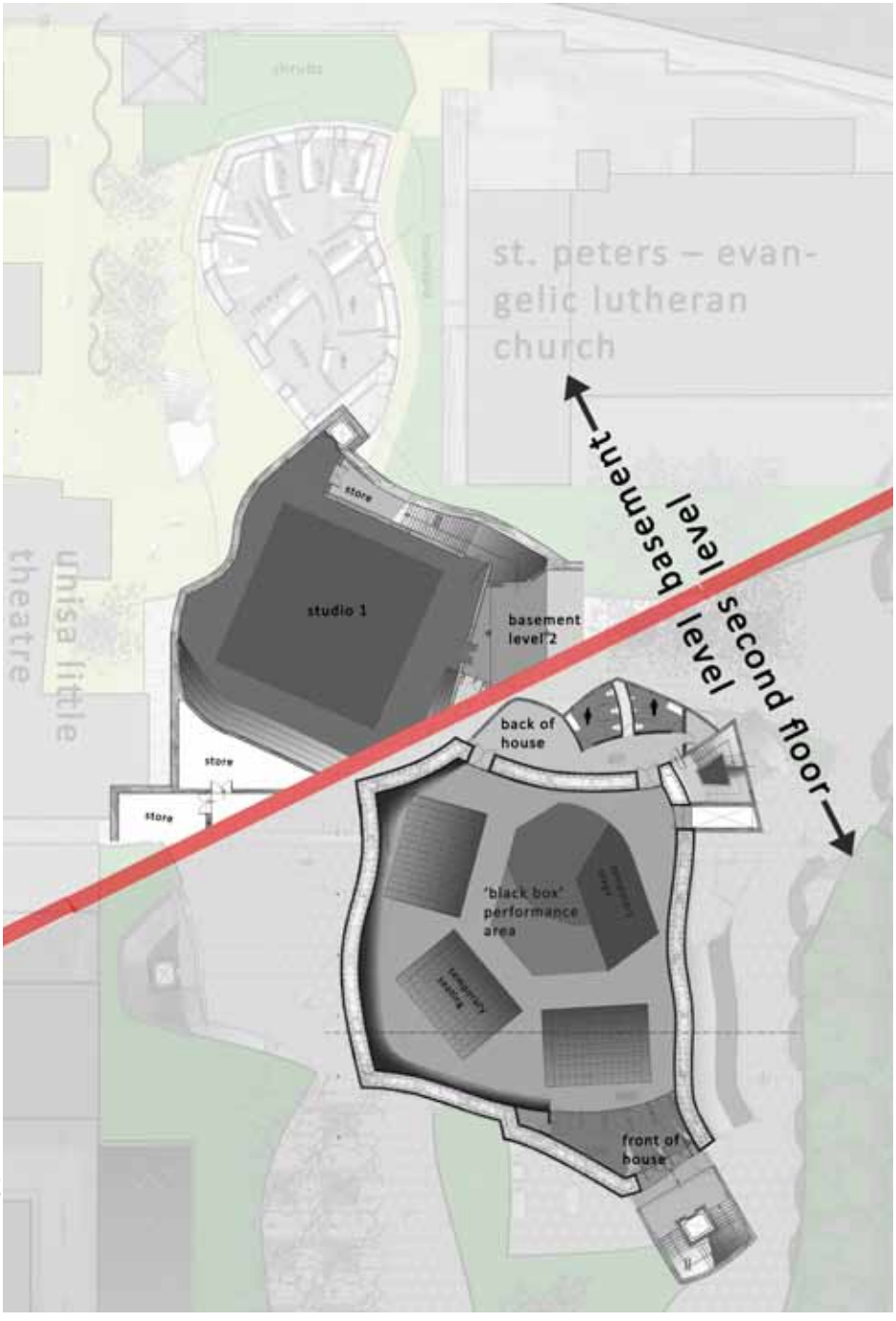


site plan

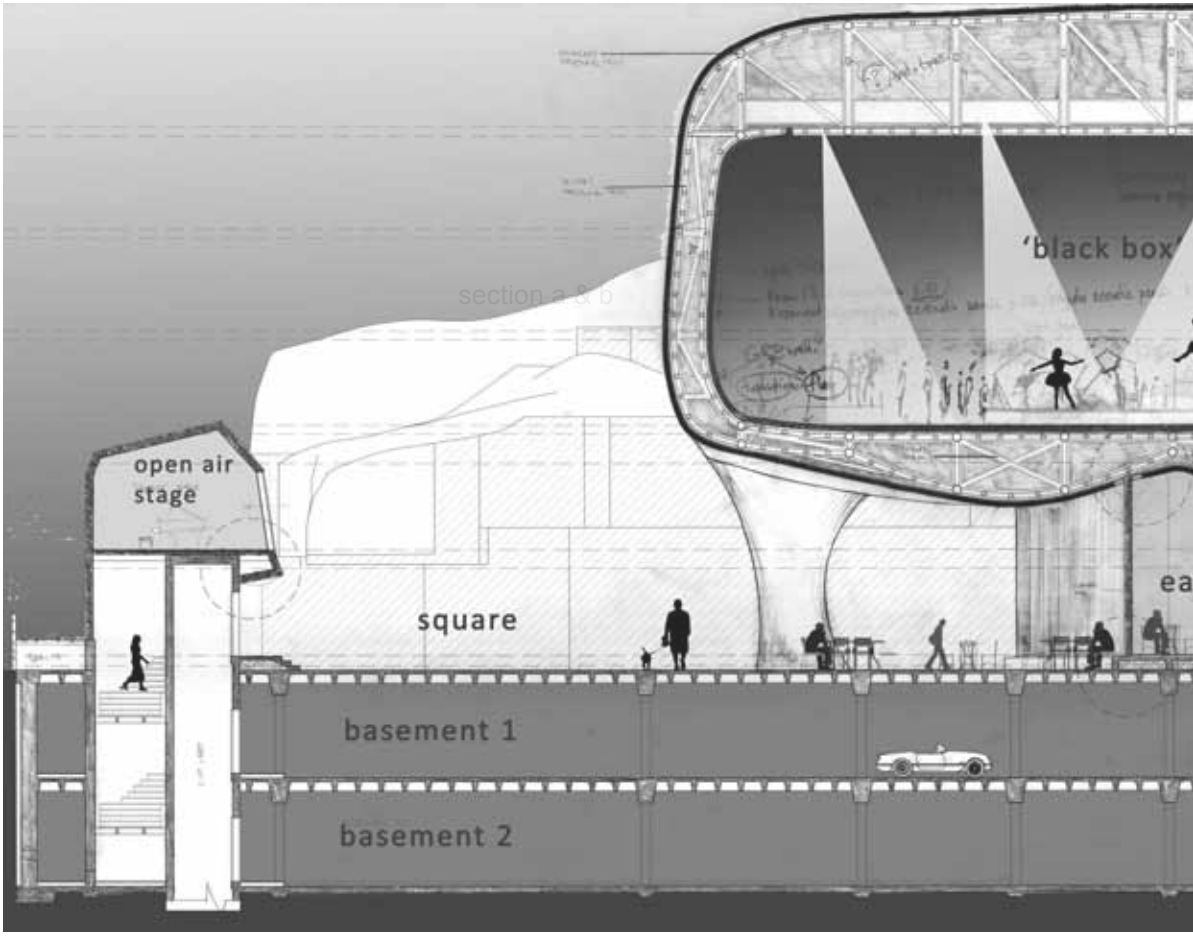
ground floor plans



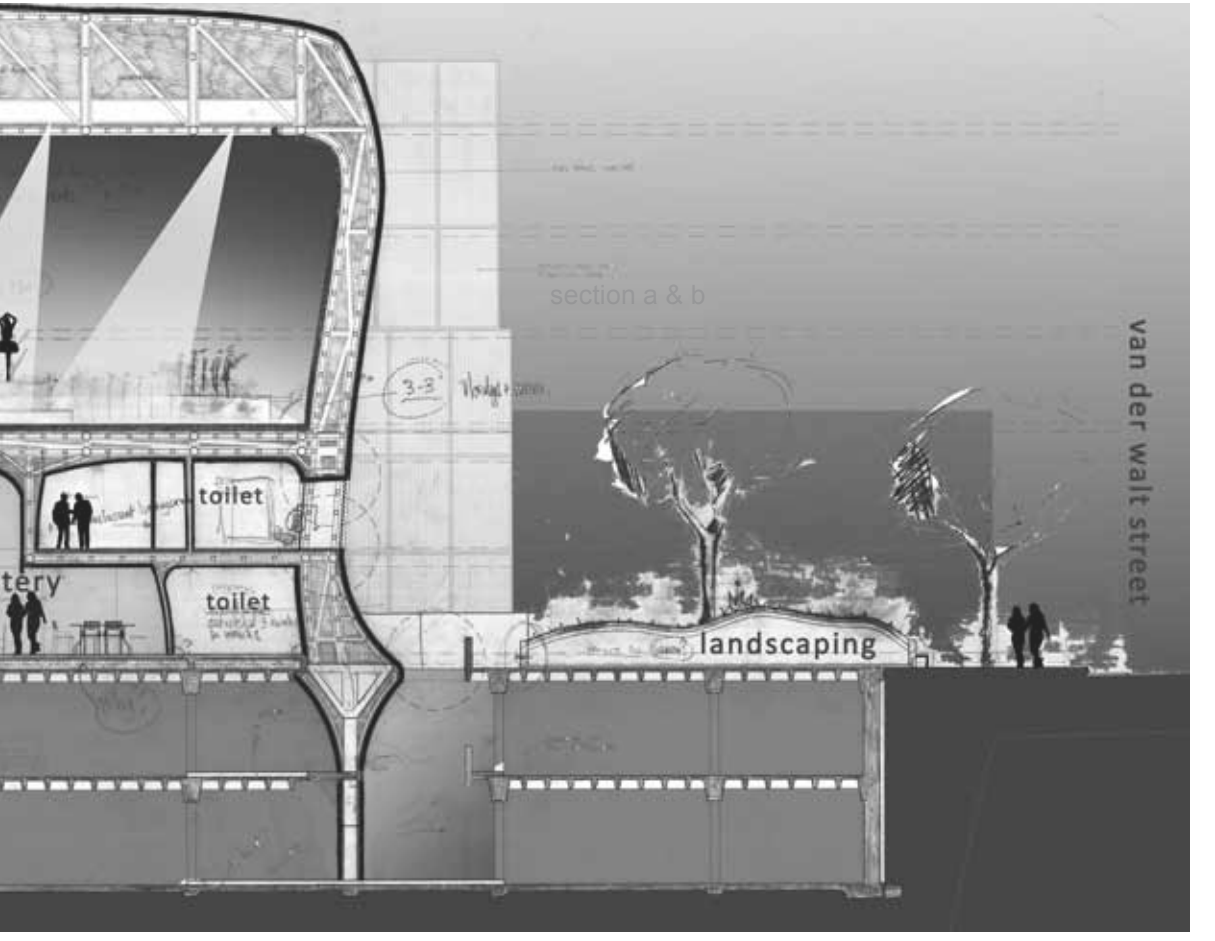
first floor plans

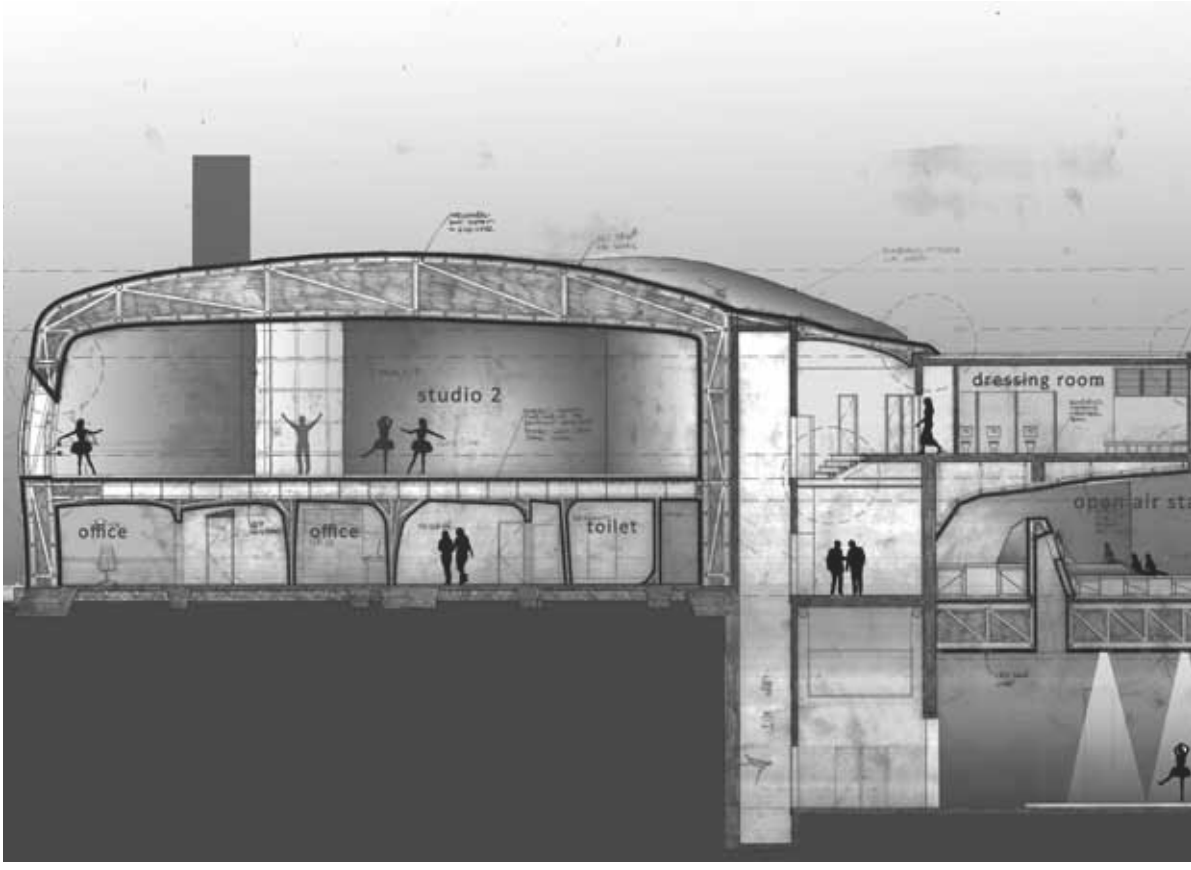


studio at basement level and second floor plan

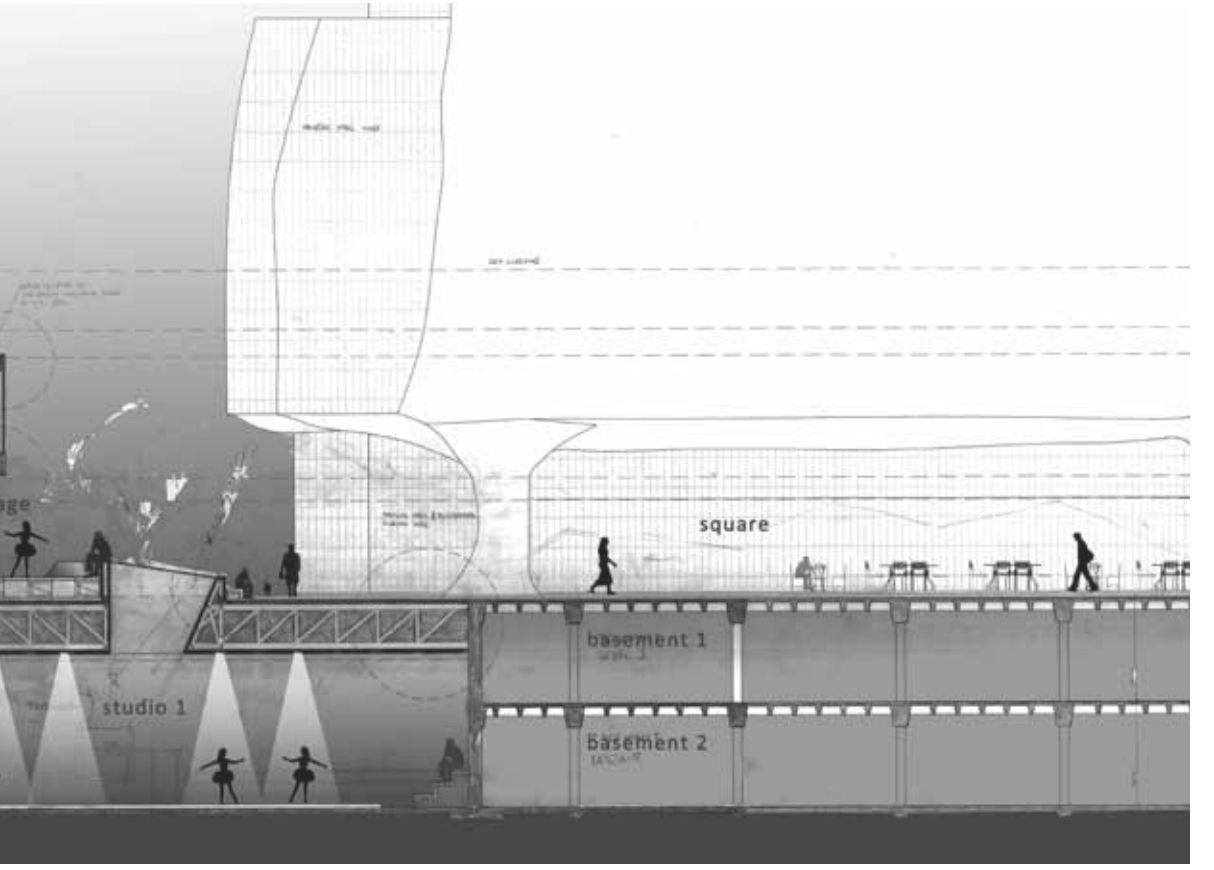


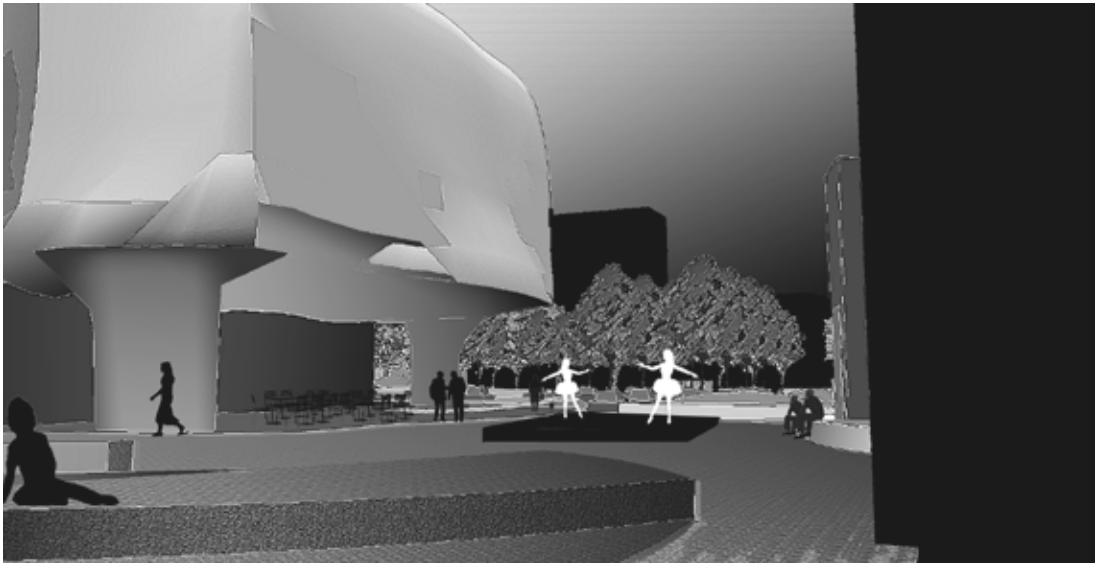
typical section


section a & b
toilet
toilet
landscaping
van der walt street

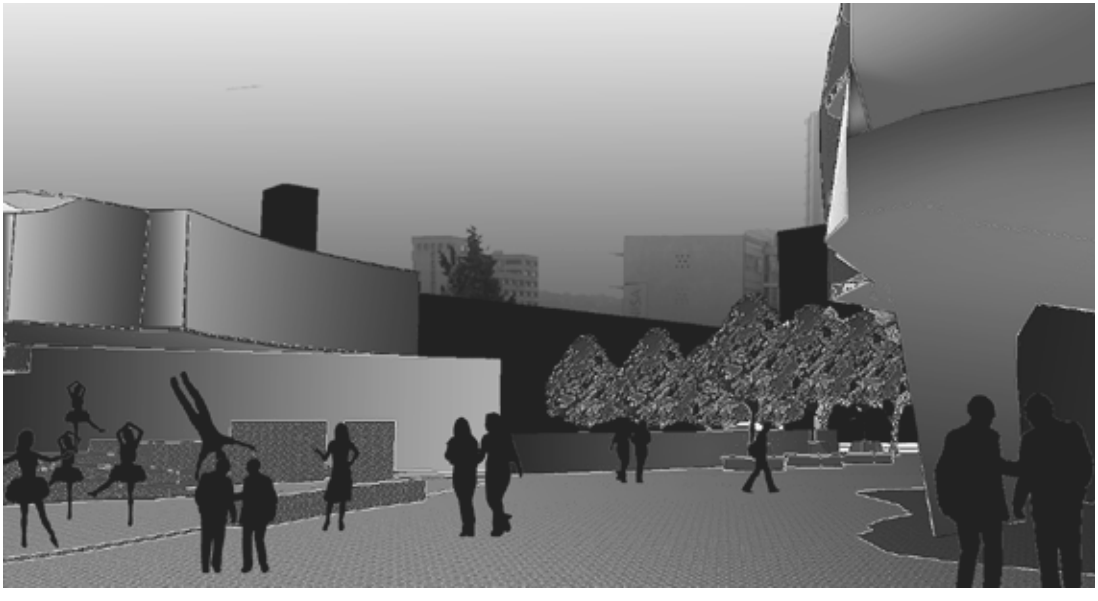


typical section

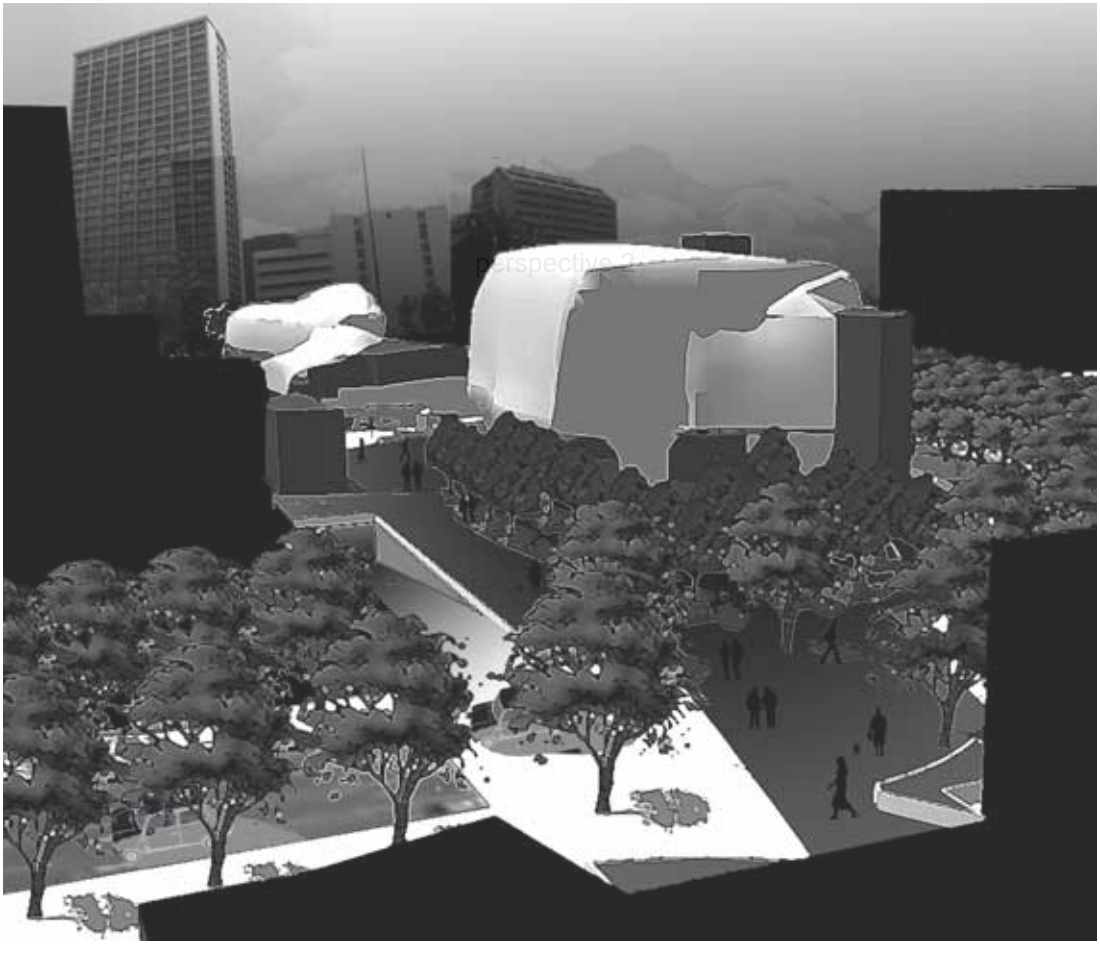

square
basement 1
basement 2
studio 1



south perspective

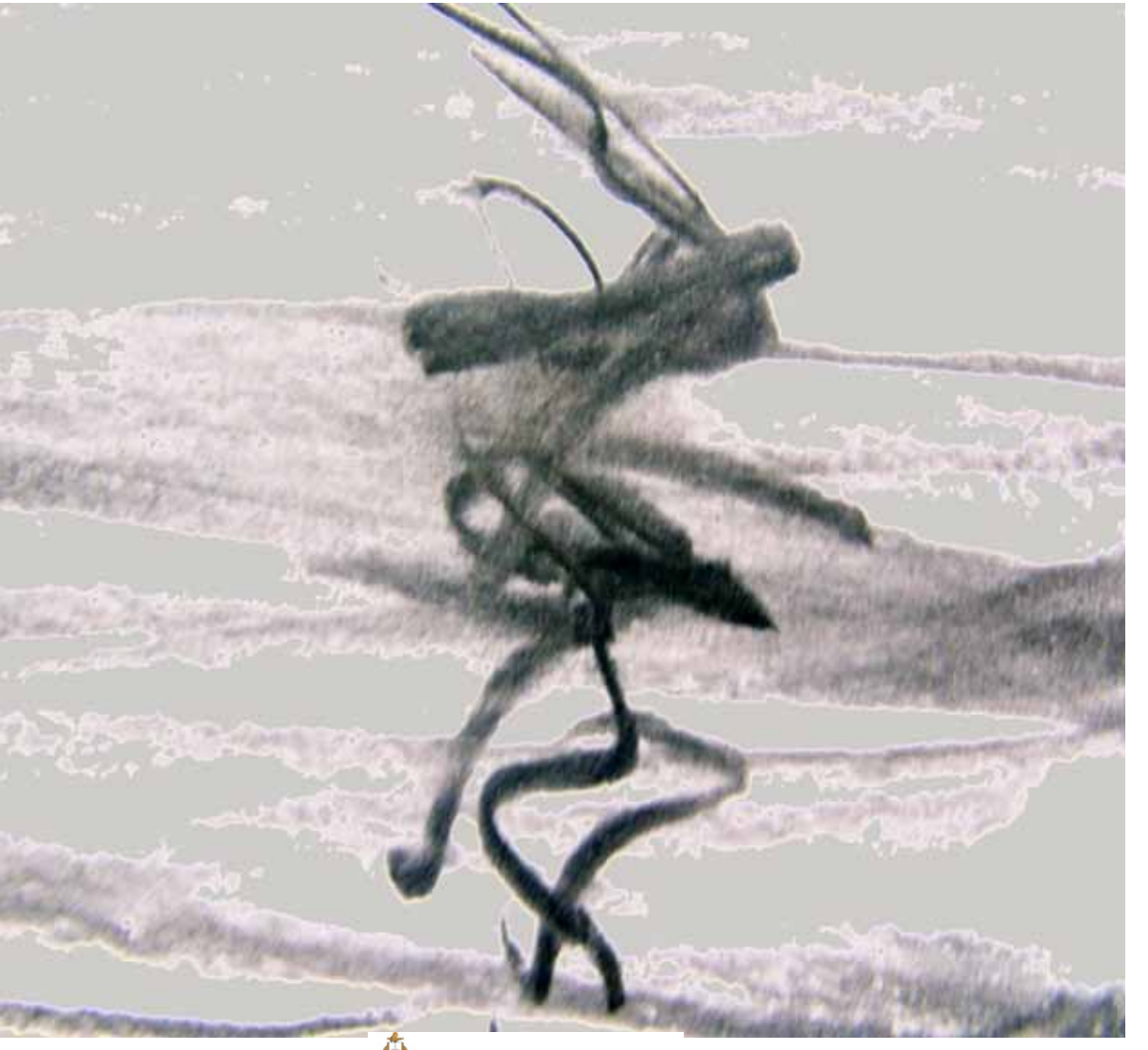


north east perspective



perspective view from visagie street north wards

chapter 07 technical discussion



introduction

This chapter briefly discusses the technical elements of the proposed project. Included are structure and cladding among relevant systems, typical drawings of the proposed project are presented.

structural systems

A reinforced concrete system is used in the basement construction and dressing rooms section of the Contemporary Dance Company. A drained basement system will be employed because of the relative high water table. In addition natural ventilation of the basement will take place. The basement will be divided into two areas: the first area will collect rain that enters the basement thought the natural ventilation openings. The other area will collect ground water as it penetrates the basement. In both cases the water will be collected by a sump at the lowest point and pumped to the municipal storm water connection (see figure 194).

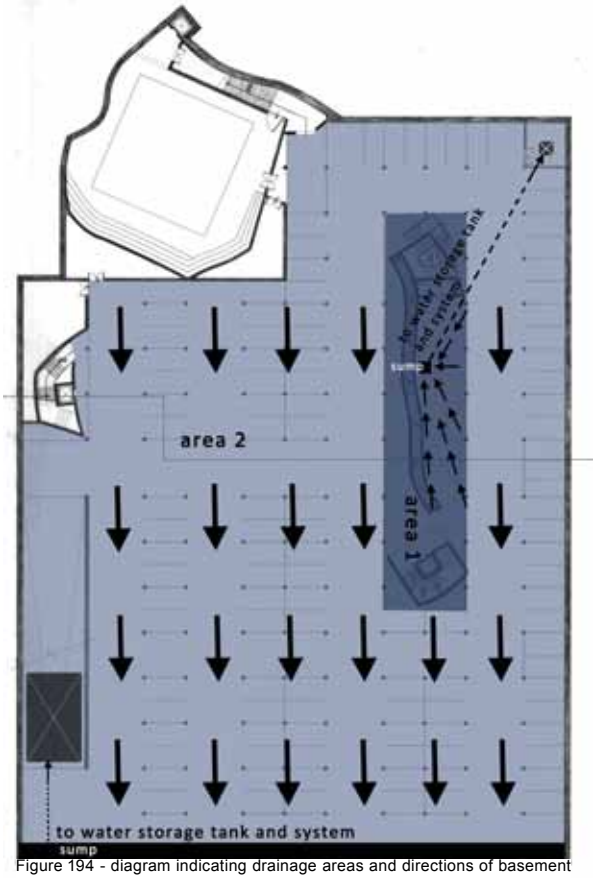


Figure 194 - diagram indicating drainage areas and directions of basement levels.

Figure 195 - sectional diagram of basem al ventilation opening.

Reinforced concrete walls are raised vertically from the basement to act as columns for the reinforced concrete ‘box’ that house the dressing room facilities. This section is the only area where major concrete construction occurs above ground level.

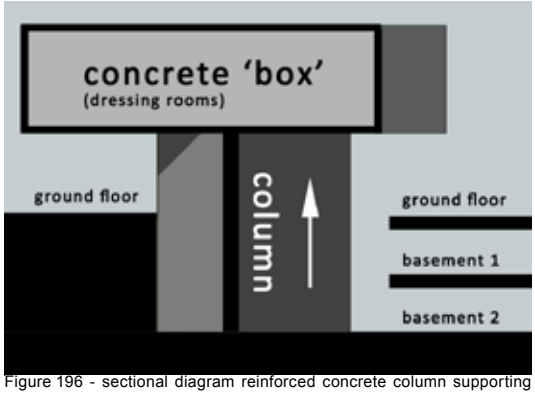


Figure 196 - sectional diagram reinforced concrete column supporting dressing room area.

The steel structural system consists of primary trusses that span the width of the building and secondary trusses spanning the length. Steel frames are connected to these trusses. These frames act as fastening connections for the cladding system as well as ensuring structural rigidity. For the ‘Black Box’ Theatre a beam had to be inserted on the one side of the structure to support the primary trusses (see figures 197-202). The interior walls consist of steel frames that are clad with GRP panels (see discussion on cladding).

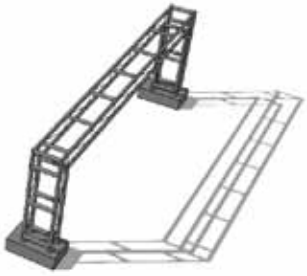


Figure 197 - diagram of the supporting steel beam structure used to support the primary trusses of the 'Black Box' theatre.

Figure 198 - diagram of primary trusses spanning the width of the building and supported by the steel beam structure on the one side.

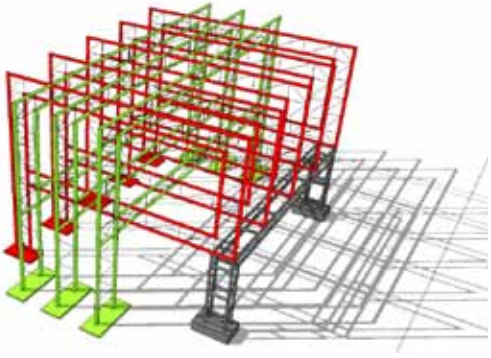


Figure 199 - diagram of secondary steel trusses spanning the length of the structure. trusses are supported on both sides.

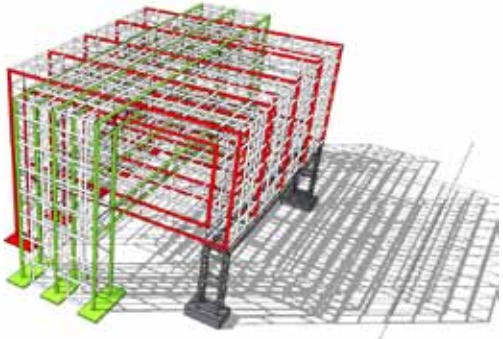


Figure 200 - diagram of supporting steel frames used to fix cladding to and to make structure rigid.

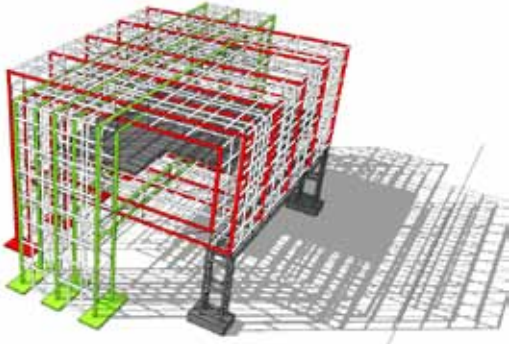
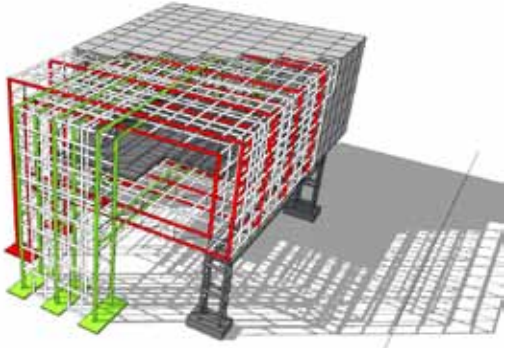


Figure 201 - diagram indicating rigid floo



!02 - diagram indicating cladding covering the structure.

The relationship of these two structural systems represent the ‘classical’ and the ‘contemporary’. The reinforced concrete basement (the ‘classical’) forms a solid ‘base’ for the hot dipped galvanised steel frame and plastic cladding structure (the ‘contemporary’). The ‘classical’ penetrates the ‘contemporary’ and makes its influence visible. This occurs with the reinforced concrete dressing room area and the tree and outside lighting grid on ground floor based on the basement column grid. Opposing this, the ‘contemporary’ infiltrates the ‘classical’ indicating its origin. This is achieved with the vertical circulation shafts that connect the basement with the upper levels (see figure 203).

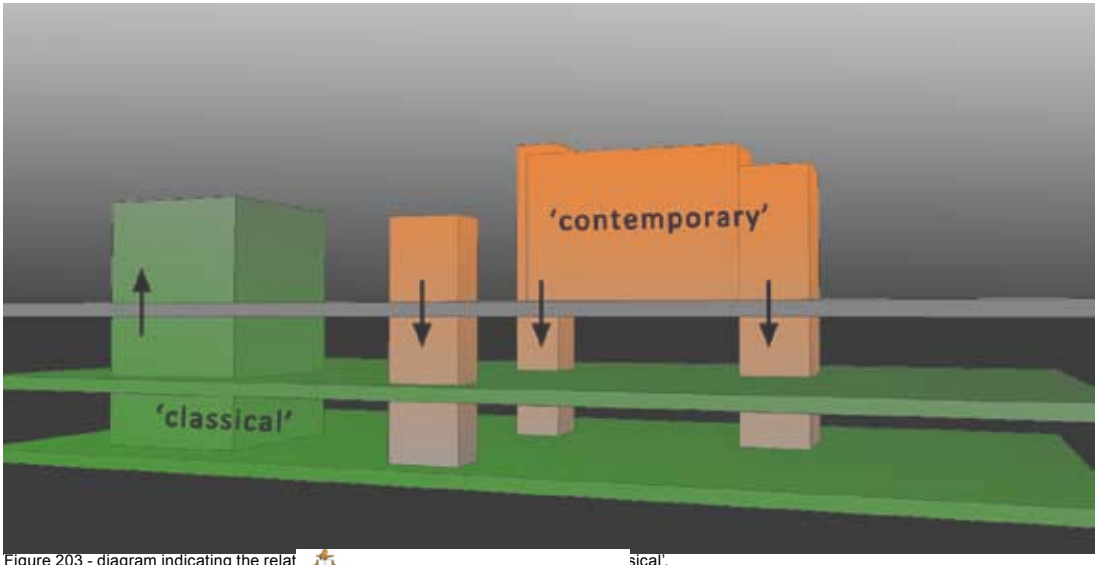


Figure 203 - diagram indicating the relat sical’.

cladding systems

A cladding layer is applied over the structural system to weatherproof the building. The cladding provide the desired expressive shapes that were developed during design process. Two cladding systems are used; Glass Reinforced Polyester (GRP) system, and a stainless steel and polycarbonate 'curtain wall' system.

GRP is a composite material formed by reinforcing flexible fibreglass mat or fibres with thermosetting polyester resins that provide high tensile and compressive strengths (Watts, 2005: 162-173). GRP's are not combustible and can be made to form translucent roof lights and opaque self supporting segmented shells. The production process is labour intensive, and requires no heavy machinery or expensive equipment, making it a craft based technique rather than an industrial process (Watts, 2005: 162-173).

An example of an application of GRP panels is the Bus Station, Hoofddorp, Netherlands, by NIO Architects 2003. This is the largest structure built entirely by synthetic materials. It consisted of factory-cut polystyrene foam with a GRP skin (Internet: Galinsky, 2005)

GRP structural shells are used to clad the majority of the development (above ground level). Panels are formed off site, transported to site and fixed to the hot dipped galvanised steel structural trusses (see figure 211). Due to the structural system, two skins of cladding are installed. An outer shell as discussed and inner shell, these are separated by an accessible service area. In certain instances where the programme has unique requirements, the inner cladding shell is replaced with other materials. For example, with the 'Black Box' theatre sound absorbing panels are installed for acoustic quality.

Figure 204 - image of application of GRP's in the Bus Station, Hoofddorp, Netherlands by NIO Architects 2003.

Figure 205 - image of application of GRP's in the Bus Station, Hoofddorp, Netherlands by NIO Architects 2003.

06 - images of application of GRP's in the Bus Station, Hoofd-etherlands by NIO Architects 2003.

The construction of the GRP panels is similar to that of fibreglass boat construction: A mold is formed to the desired shape. A layer of release wax and then a gel coat (for colour) is applied. After this the laminating process follows. Layers of glass reinforced polyester are built up on each other until the desired thickness is reached.

For the GRP panels the process continues. Structural rib cavities are formed and then filled with polyurethane foam. The other cavities are filled with thermal insulation. Two separate panels, an inner and outer panel, are constructed of site to make assembly on site simple. These panels are fixed to each other with double sided structural tape. The outer panel is finished off with a polypropylene honey comb sheet.

Figure 208 - image of gel coat being applied.

Figure 209 - image of first layer of fibreglass being sprayed on.

Figure 210 - image of 'core' material being added for stability and bulk.

Figure 207
boat const

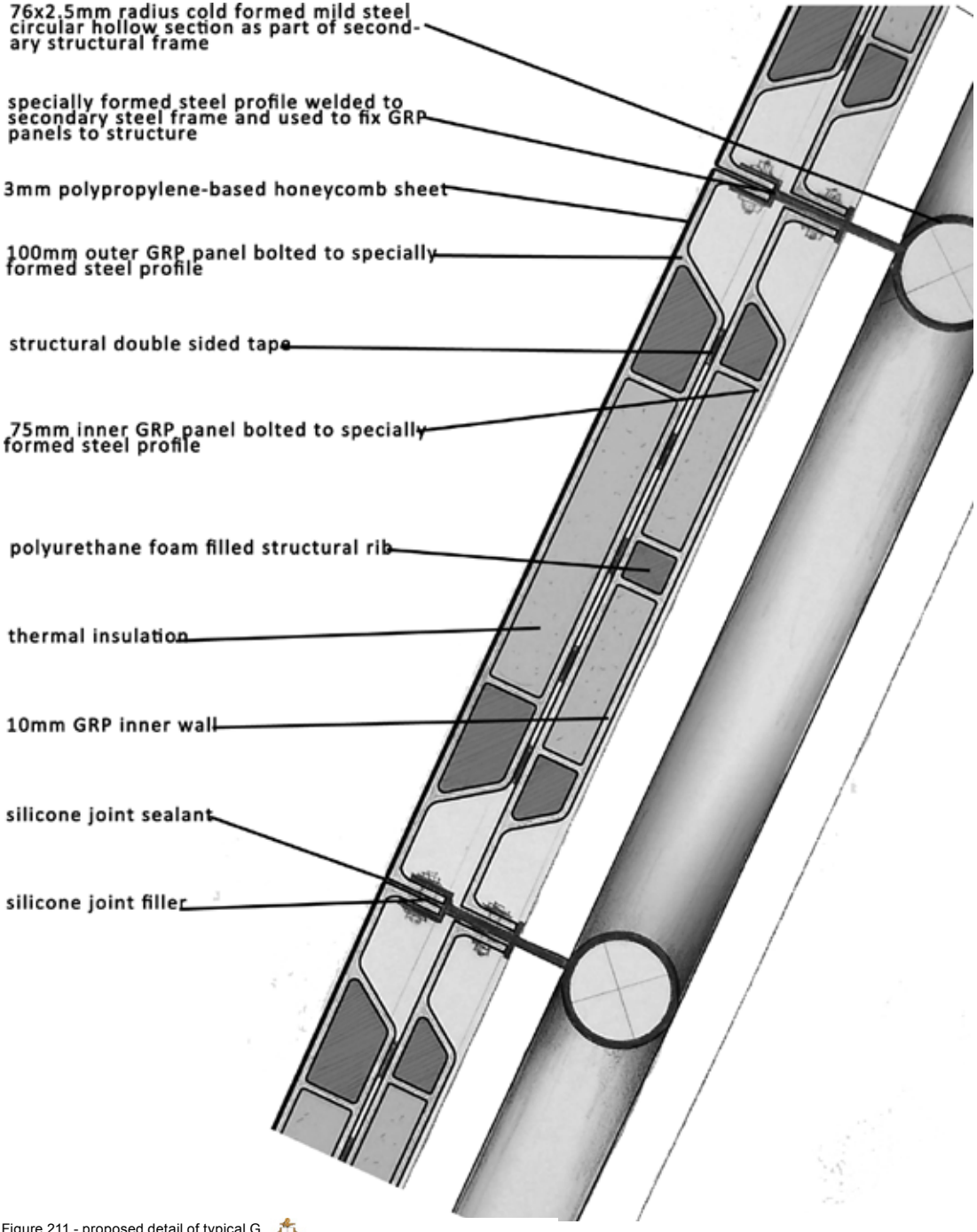


Figure 211 - proposed detail of typical G

The second cladding system employed is a combination of a stainless steel frame filled with translucent polycarbonate sheets and adjustable louvres. Hot dipped galvanised welded steel mesh panels are used for shading (see figure 215). Polycarbonate sheets and louvres are arranged within the stainless steel frame to form a desired pattern on façade (see figure212). The shading mesh is a rigid prefabricated welded stainless steel mesh, similar to that used in the Kew House, Melbourne, Australia by Sean Godsell Architects 1996-1997 (see figures 213-214).

Figure 213 - image of similar stainless steel cladding used in Kew House, Melbourne, Australia by Sean Godsell 1996-1997.

Figure 214 - image of similar stainless steel cladding used in Kew House, Melbourne, Australia by Sean Godsell 1996-1997.

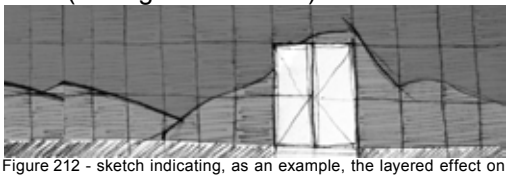


Figure 212 - sketch indicating, as an example, the layered effect on facade.

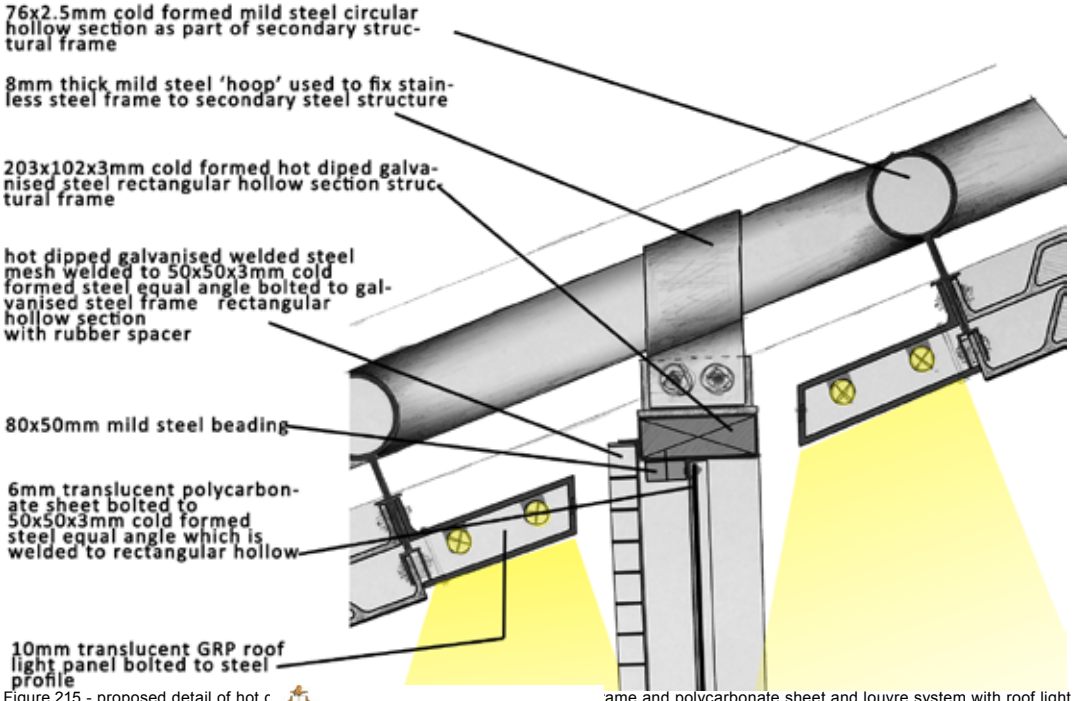


Figure 215 - proposed detail of hot d ame and polycarbonate sheet and louvre system with roof light connection.

Floor systems

The floor system for the upper levels will consist of a ‘QC flooring’ system (Internet: HH Roberson, 2009). This is a composite steel and concrete slab system that forms a solid base for a floor finish that varies with the programme.

Temporary stages are used throughout the performance areas. These systems are adaptable as per requirement and may range from extravagant sets to standard platforms.

Figure 216 - example of temporary stage systems assemble and storage.

Figure 217 - example of temporary stage systems.

Figure 218 - example of temporary seating system.

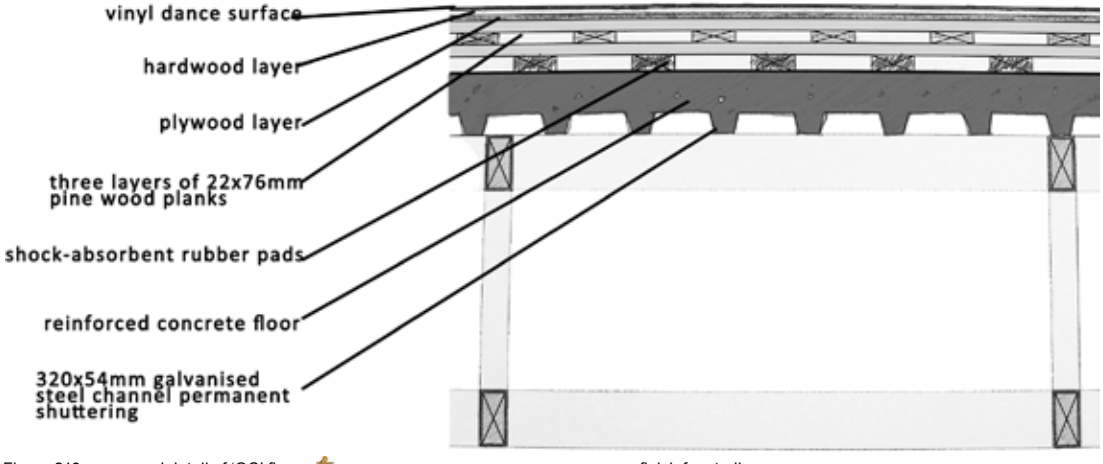


Figure 219 - proposed detail of ‘QC’ floo r finish for studios.

Lighting system.

GRP roof lights are used throughout the proposed project. These lights are inserted between the GRP cladding panels where specified. Where two opposing materials join a GRP light panel is fixed to the more rigid of the two, thus emphasizing the connection by deliberately creating a divider.

Ventilation

Both the proposed buildings consist of areas with varied needs in terms of maintaining comfort levels. Mechanical ventilation systems are introduced for both buildings. To accommodate the difference in comfort levels a de-centralised HVAC (Heating Ventilation and Air-conditioning) system is installed. The unit size is five percent of the floor area and is accommodated on the roof or in the basement. If placed in the basement additional mechanical ventilation is provided to get rid of excess heat.

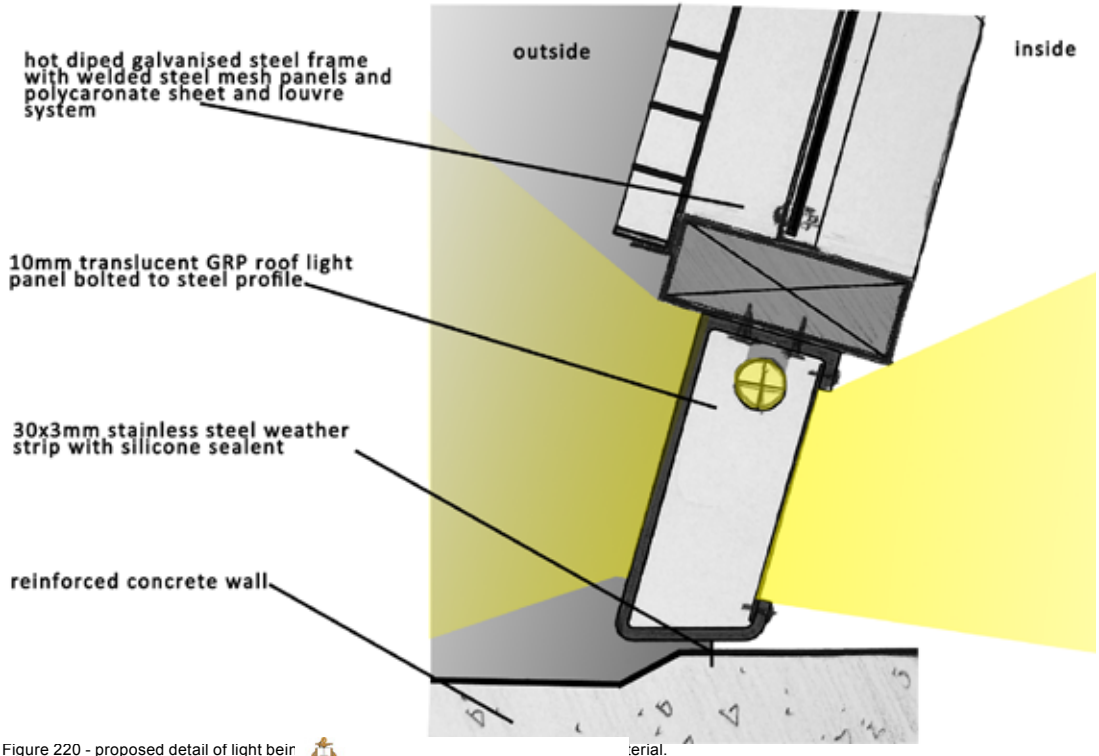


Figure 220 - proposed detail of light beir erial.

Circulation

Vehicles enter the basement on the South West corner from Visagie Street. From the basement level there are four possibilities of vertical circulation:

- On the west side there is an lift and stairs that connects basement levels with the public square and the raised open air stage.

- Stairs connect basement level 2 with the Contemporary Dance Company. These stairs are semi public and is mostly used by the inhabitants of the Company and the Unisa Little Theatre.

- Stairs and lift connects the basement levels with the ground floor foyer and the front of house of the 'Black Box' theatre.

- Stairs connect the basement levels with the ground floor, back of house and administration areas of the 'Black Box' theatre. These also act as emergency exit for the theatre and are stepped on ground floor level to accommodate this.

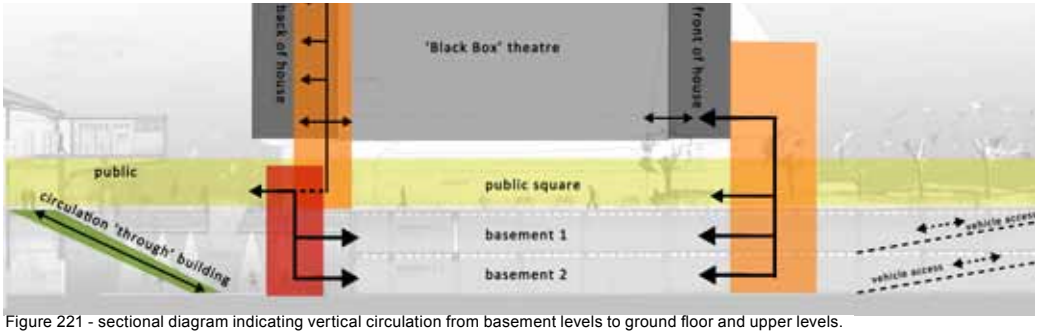


Figure 221 - sectional diagram indicating vertical circulation from basement levels to ground floor and upper levels.

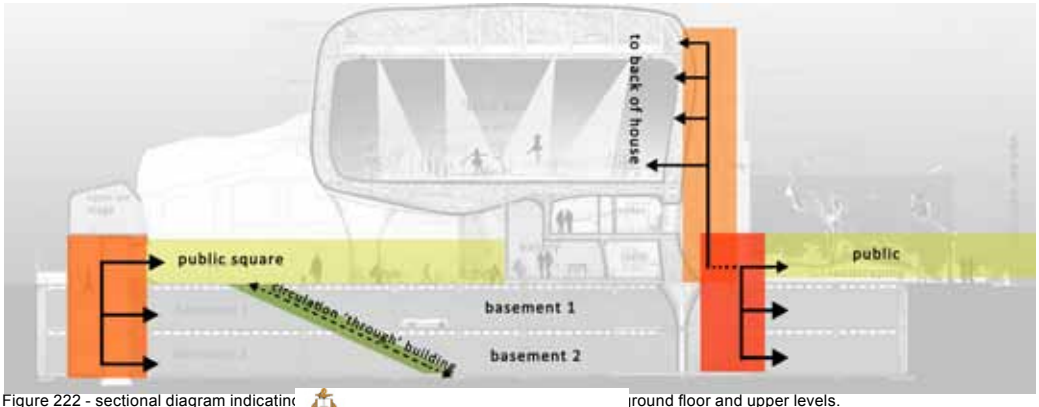
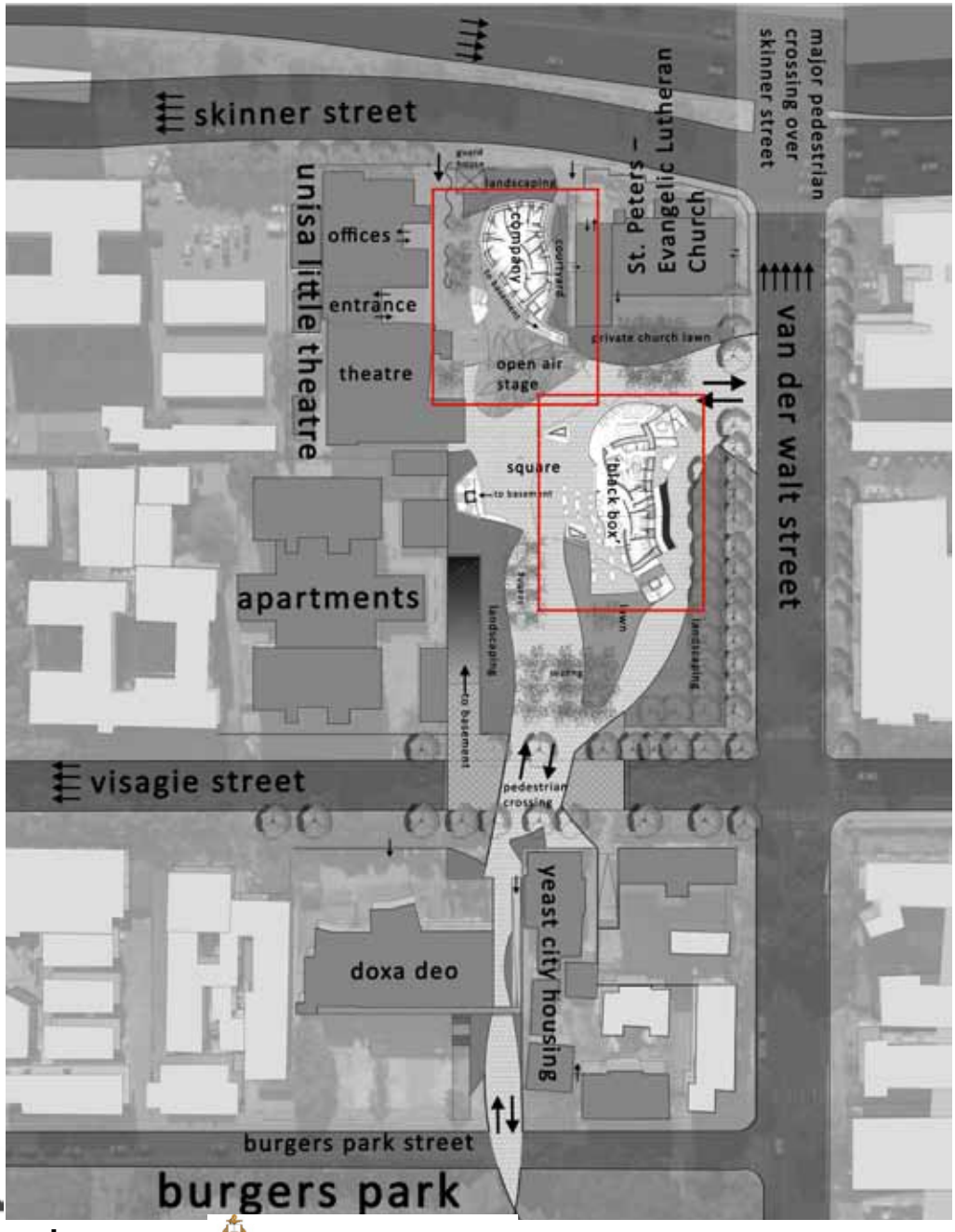


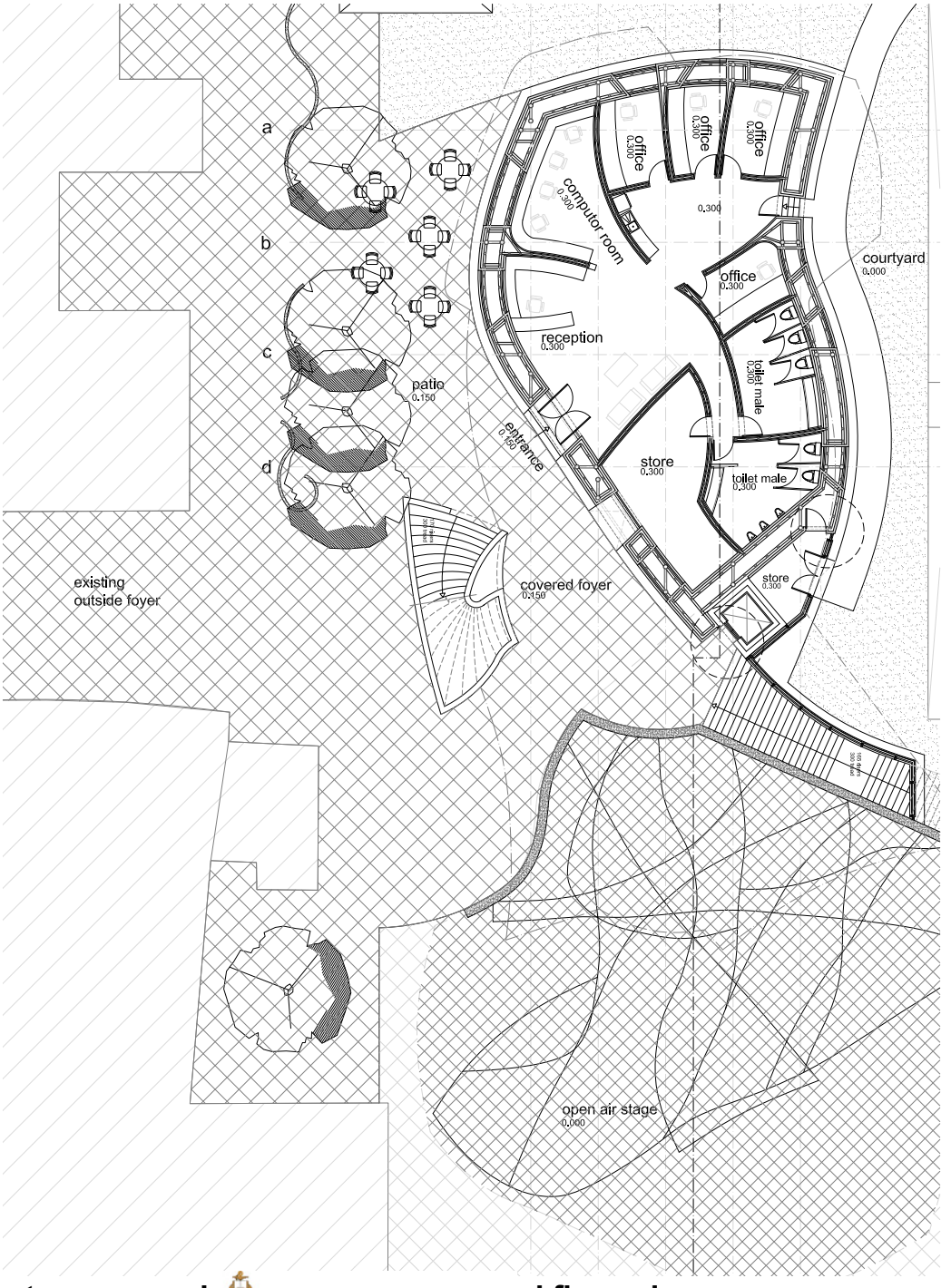
Figure 222 - sectional diagram indicating ground floor and upper levels.

summary

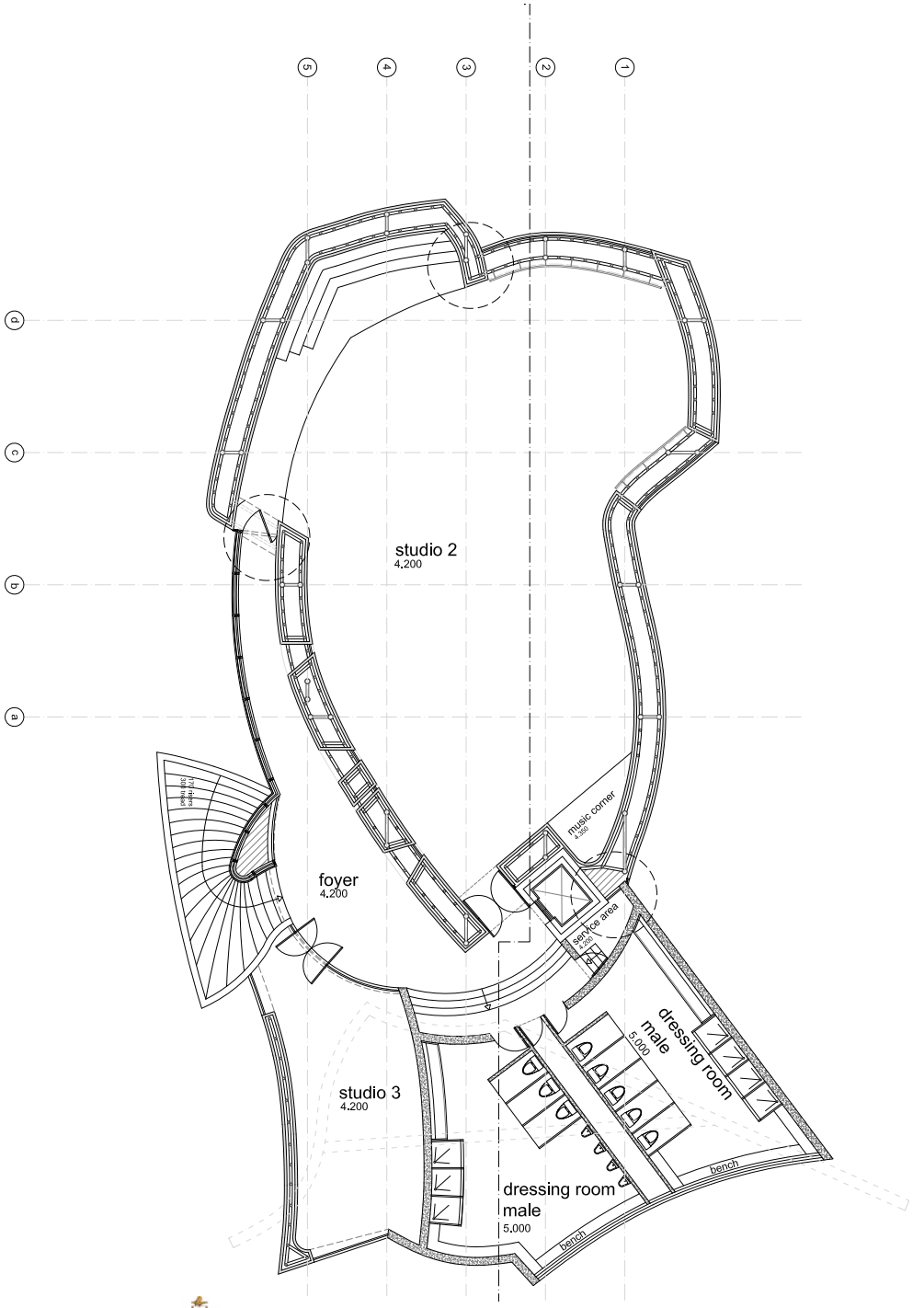
The technical resolution process did not happen in isolation from the design process. This was done for two main reasons: to support the authors believe for the importance of tectonics and to ensure a balanced process is pursued between the freedom (‘fantasy’) and the technical (‘reality’).

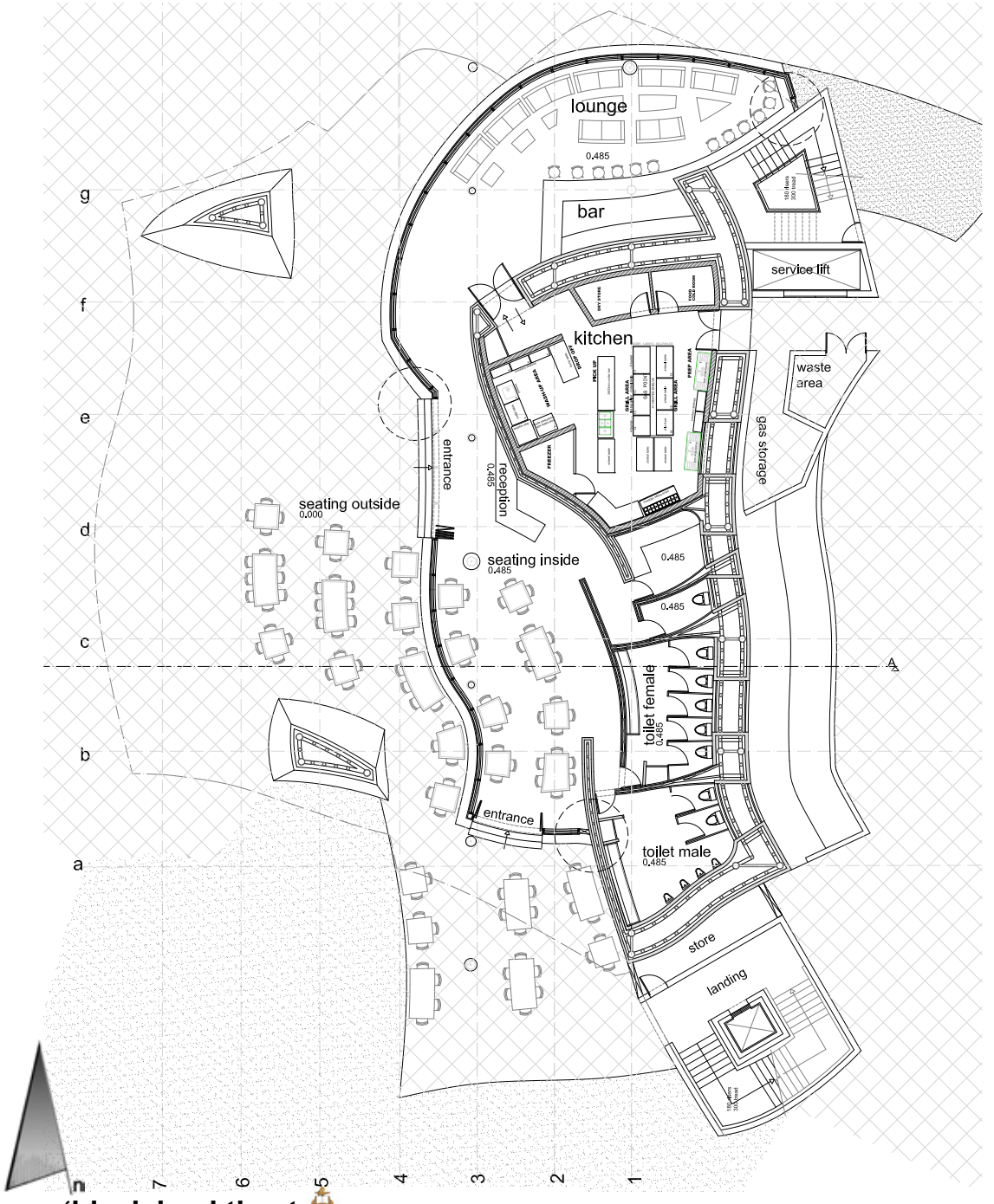


site plan



contemporary da[illegible]nd floor plan




lounge
0.485
bar
service lift
kitchen
waste area
gas storage
entrance
reception
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seating outside
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seating inside
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toilet female
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entrance
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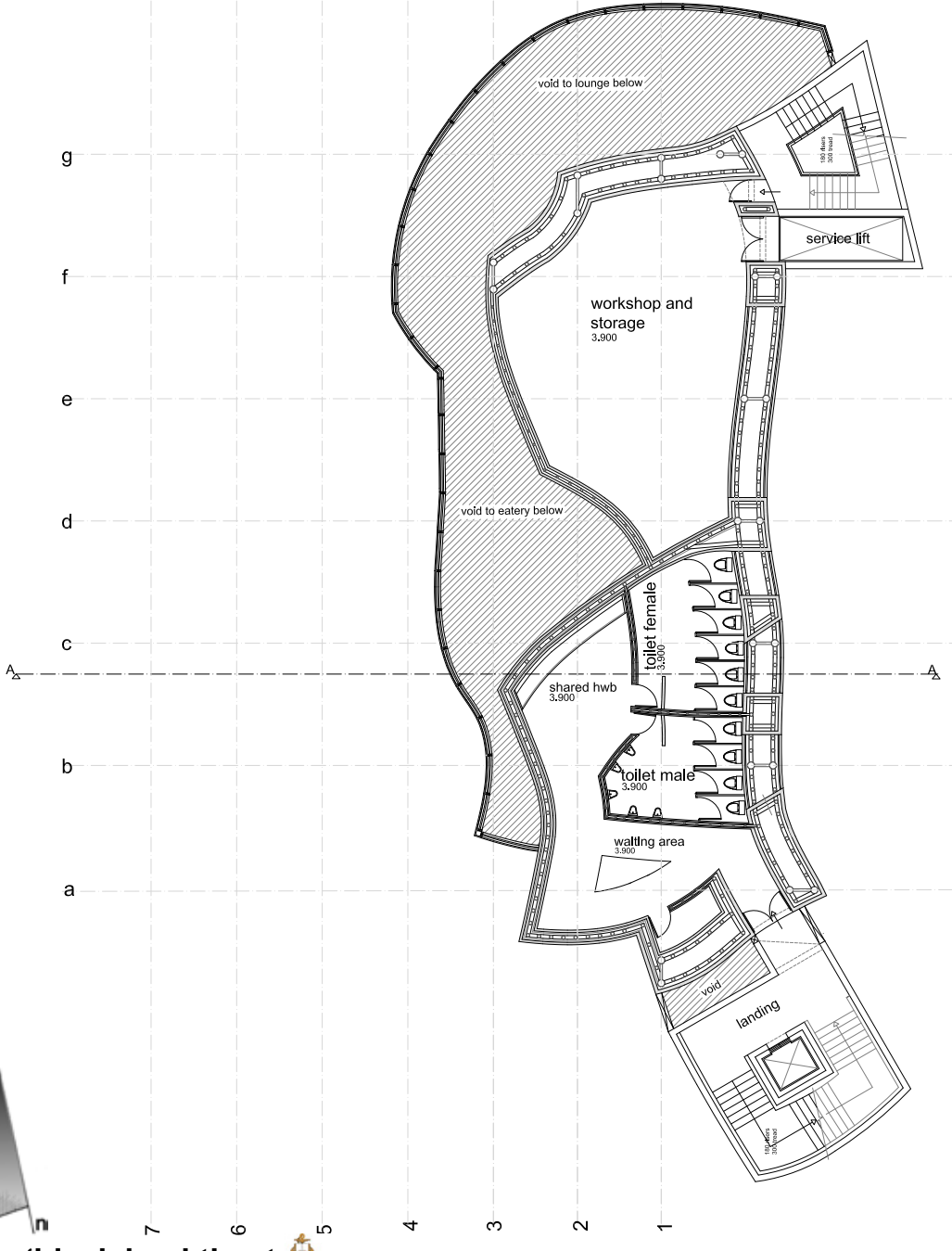

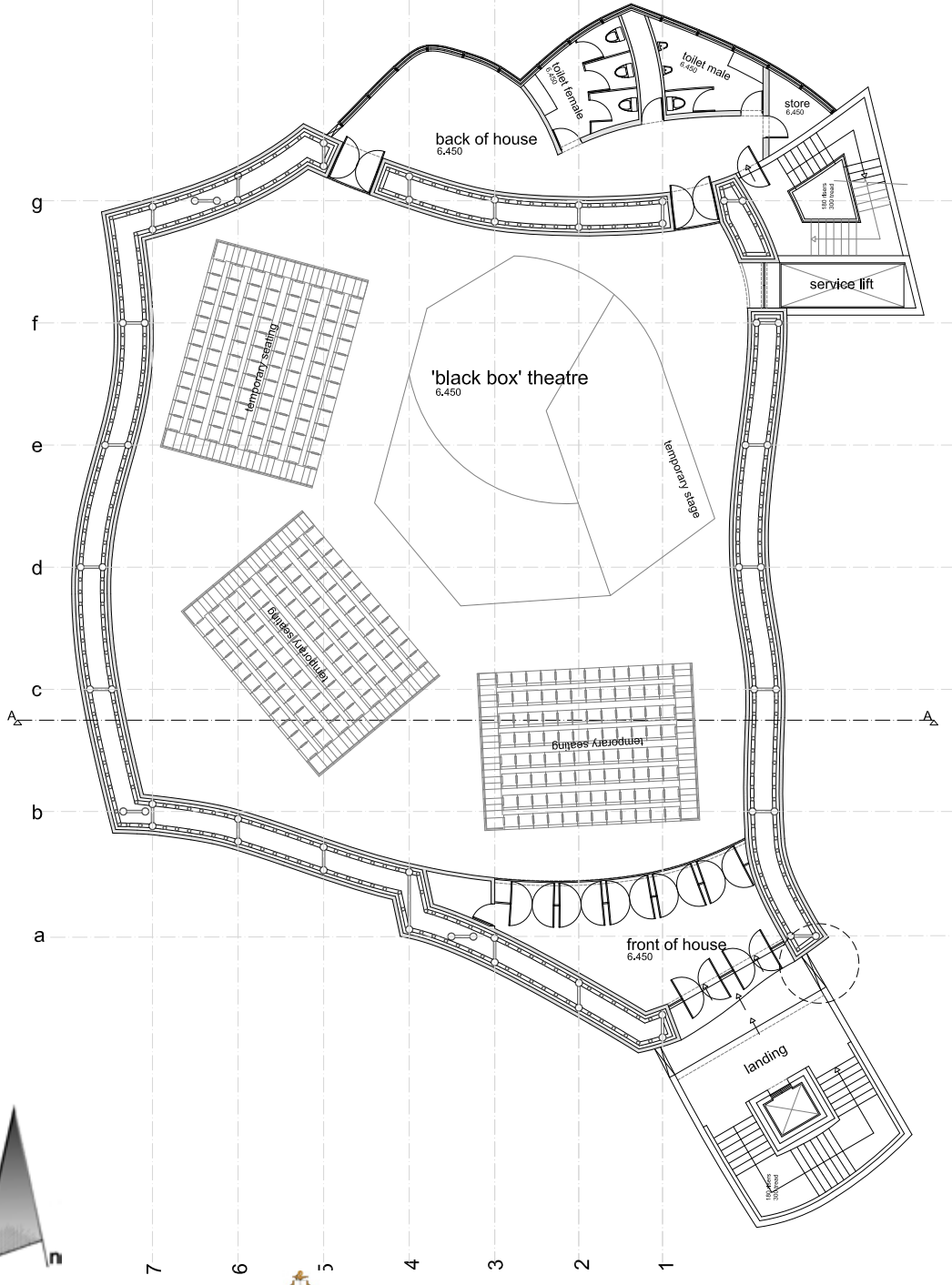
back of house
6.450
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'black box' theatre
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temporary stage
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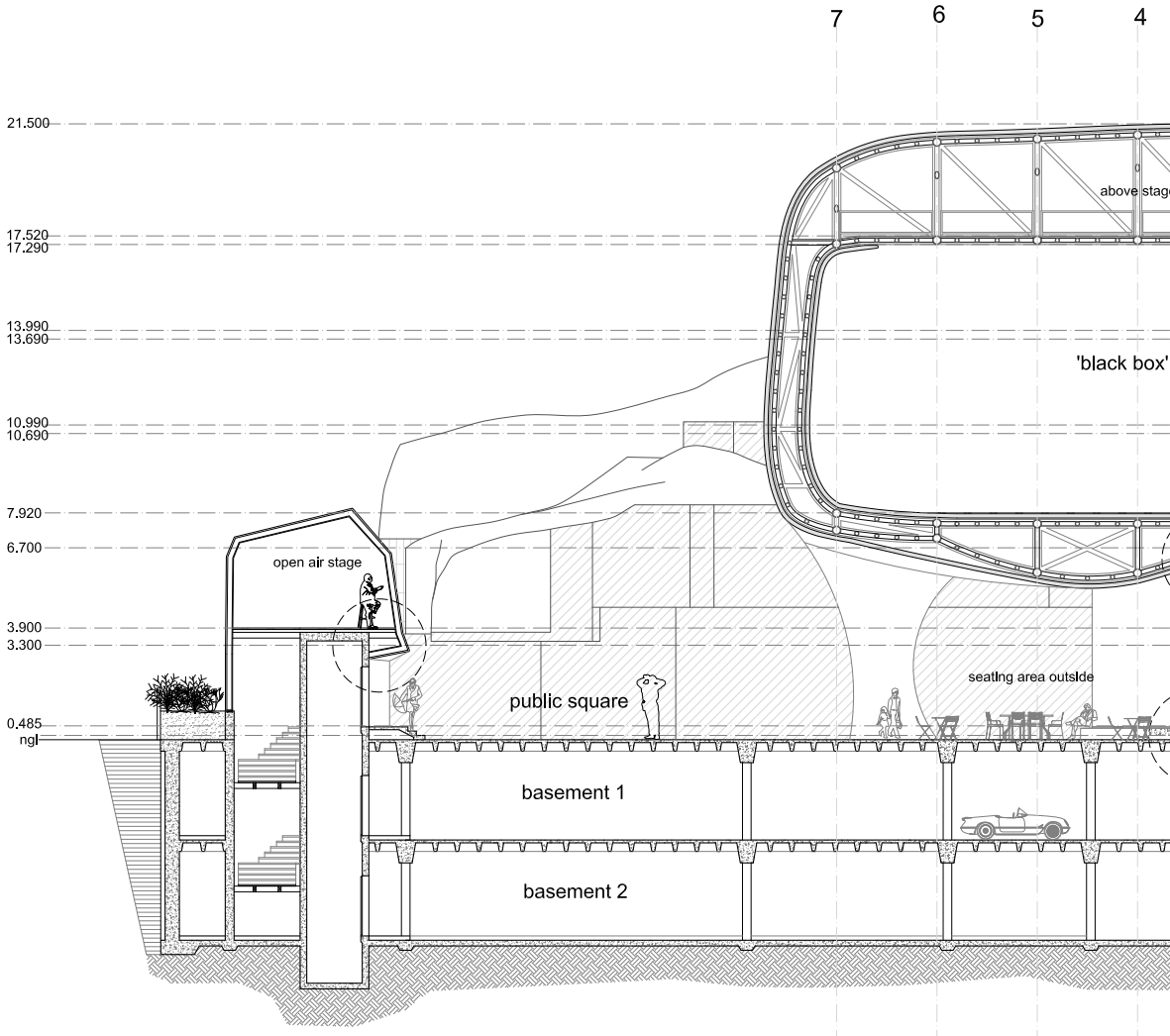
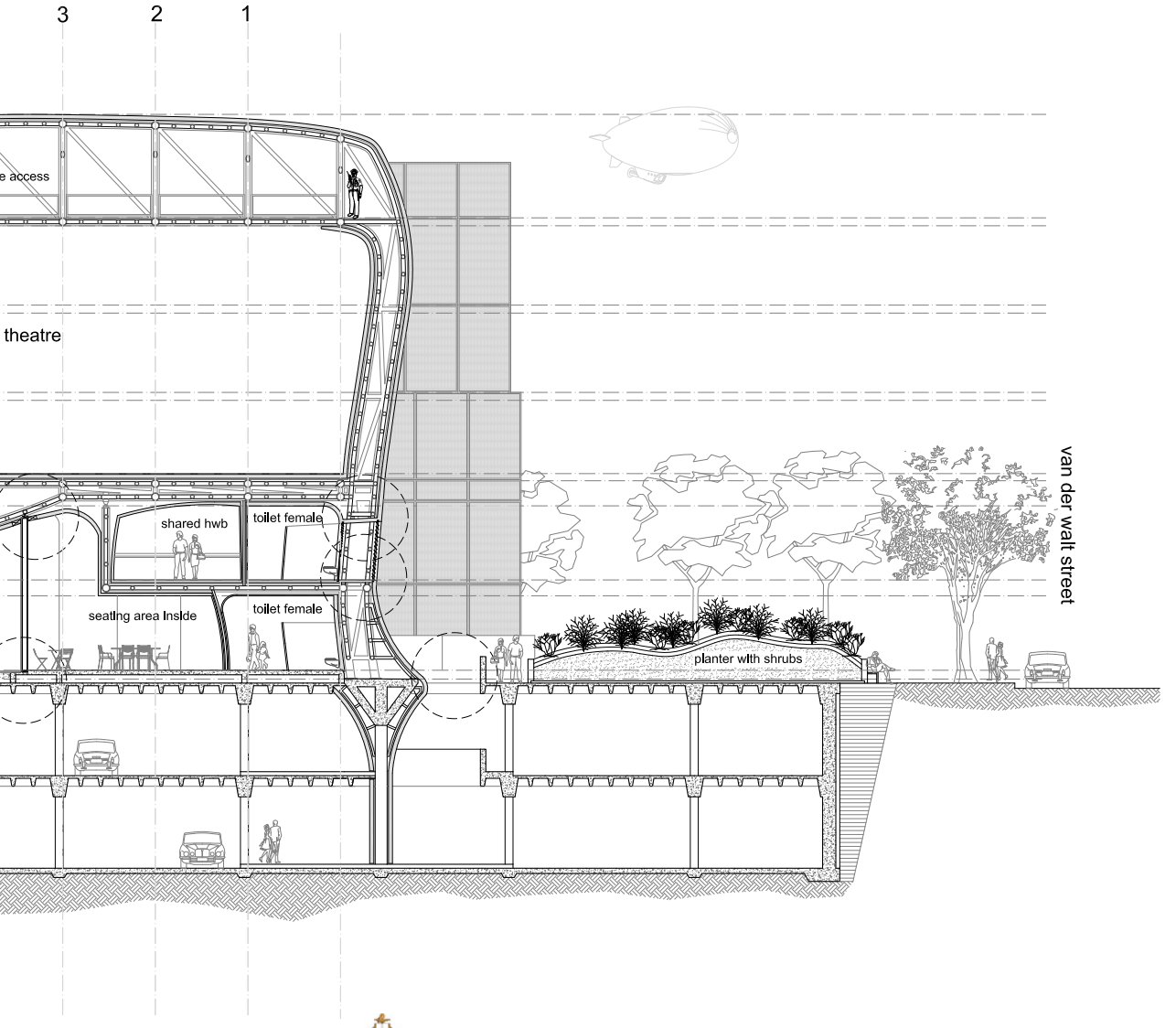


section a-a


3
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1
e access
theatre
shared hwb
toilet female
seating area Inside
toilet female
planter with shrubs
van der walt street

project conclusion

From the outset, this year intended to serve as a stepping stone for the development of the author as designer and architect. A different design process was explored deliberately. This was done largely as a reaction to the perceived monotonous and restrictiveness of the current architectural education system. This project represents an attempt to change the design outcome by challenging the process. This proved necessary to expand on the freedom (‘fantasy’) of the designer/architect.

It is the author’s opinion that architects should strive to be artists, despite the restrictive nature of architecture. The successful amalgamation of idea and exploration should elevate architecture to its rightful place, as the highest form of art.

The proposed design project attempts a coherent relationship with the SchizoCity framework. Furthermore, it underwrites an advanced role of the architect – the artist within society.

The design was process orientated. Various experiments served as possible design generators. Although challenging, it proved to be stimulating, exciting and rewarding.

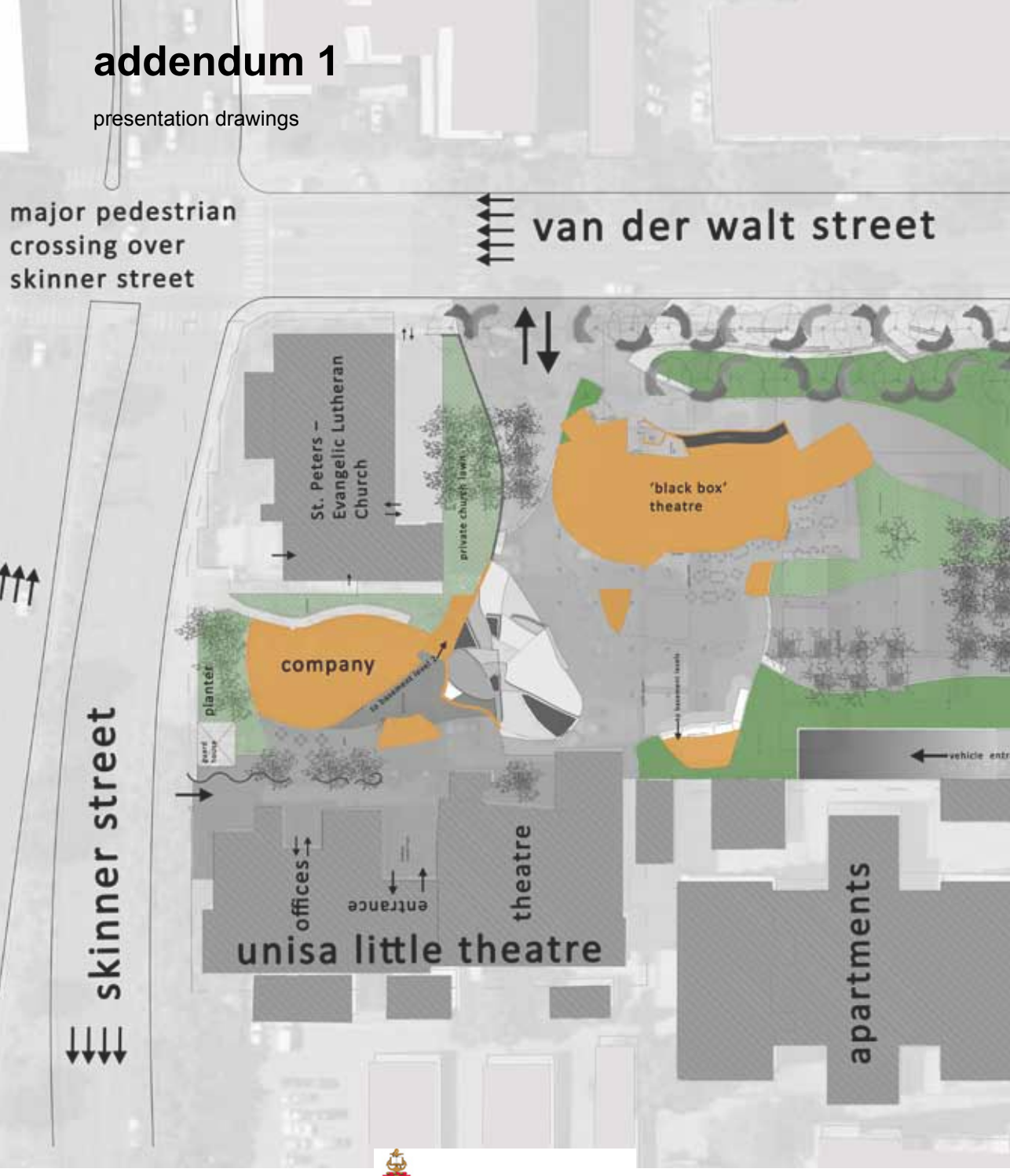
The proposed design represents a challenge within the realm of tectonics and construction. Various structural systems, material relevance and construction methods were explored as a direct result.

This dissertation emphasized the importance of the design process for the author. It provided an environment where the exploration was launched from an urban framework and creates a base for future exploration and development.

Finding the balance between freedom (‘fantasy’) and ‘reality’ as expressed in the execution of this dissertation, render a positive contribution to the architectural community and reinstates the author’s ardour for the art of architecture.

addendum 1

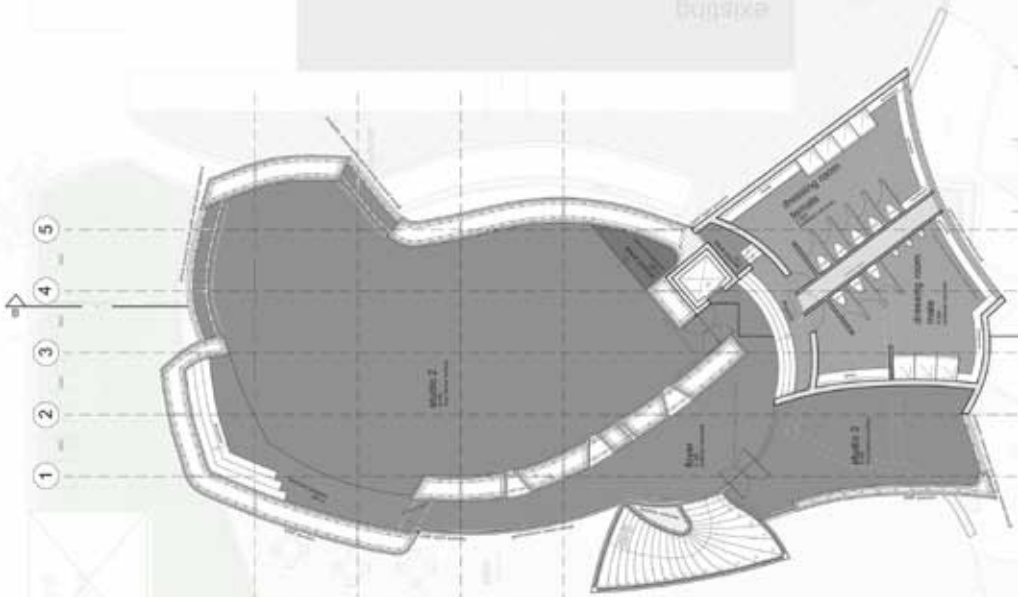
presentation drawings

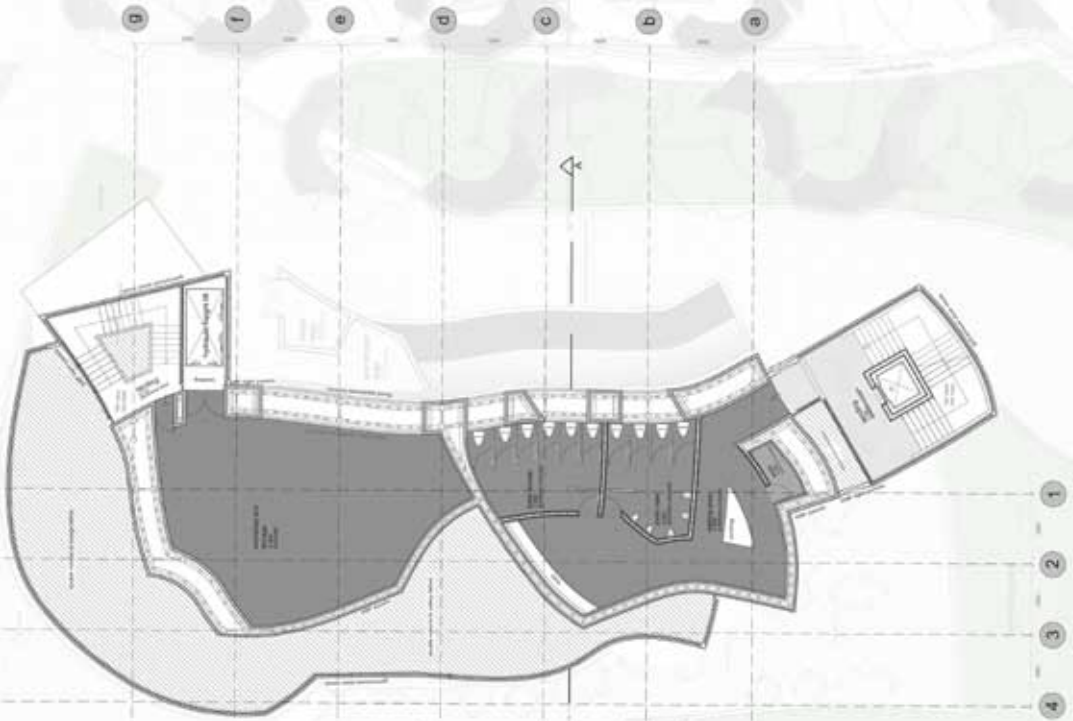


yeast city housing
pedestrian crossing
doxa deo
visagie street
burgers park street

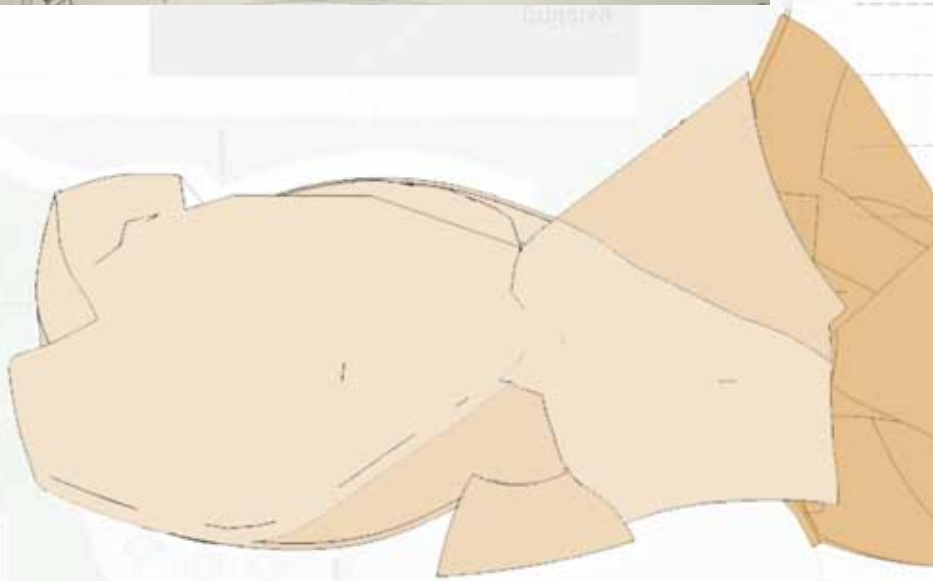
site plan

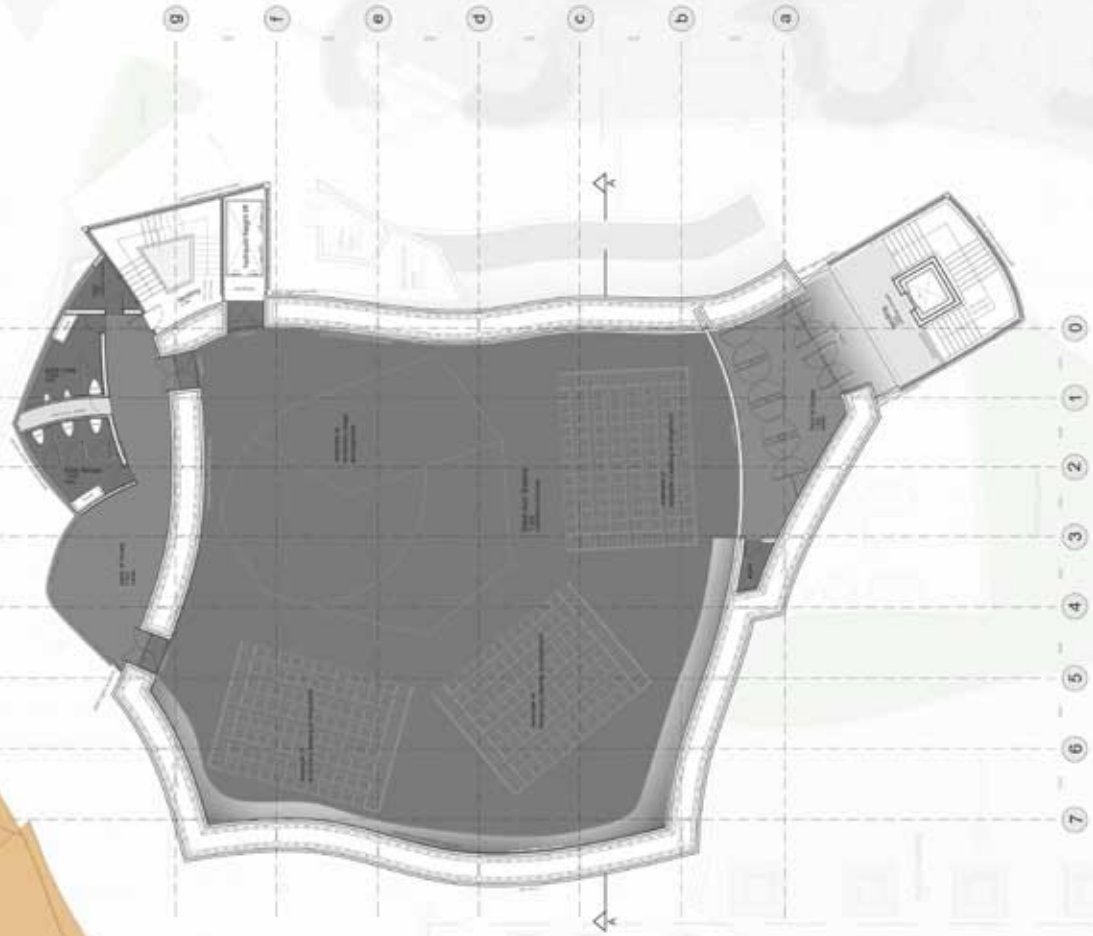
ground floor plans



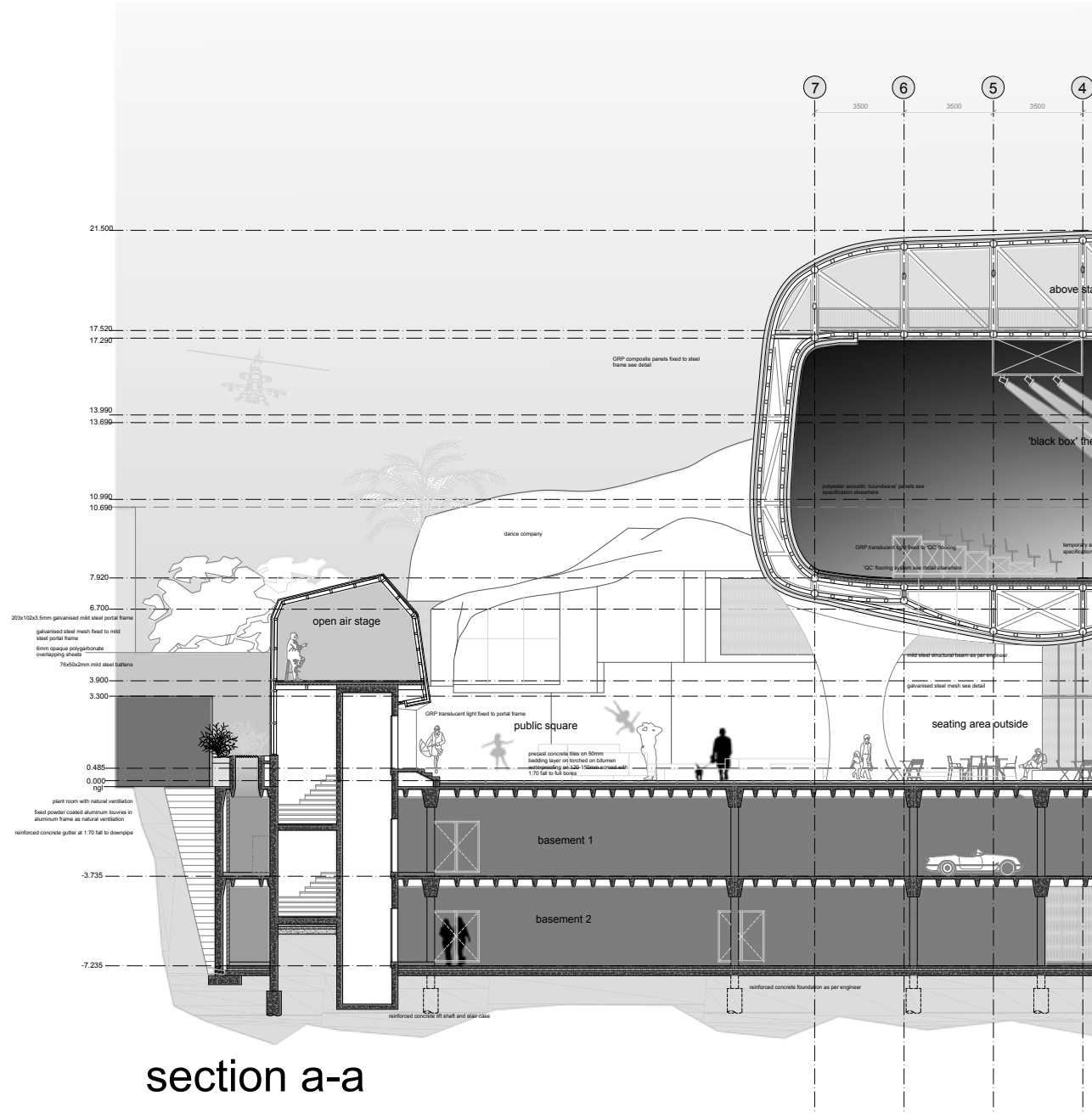


first floor plans

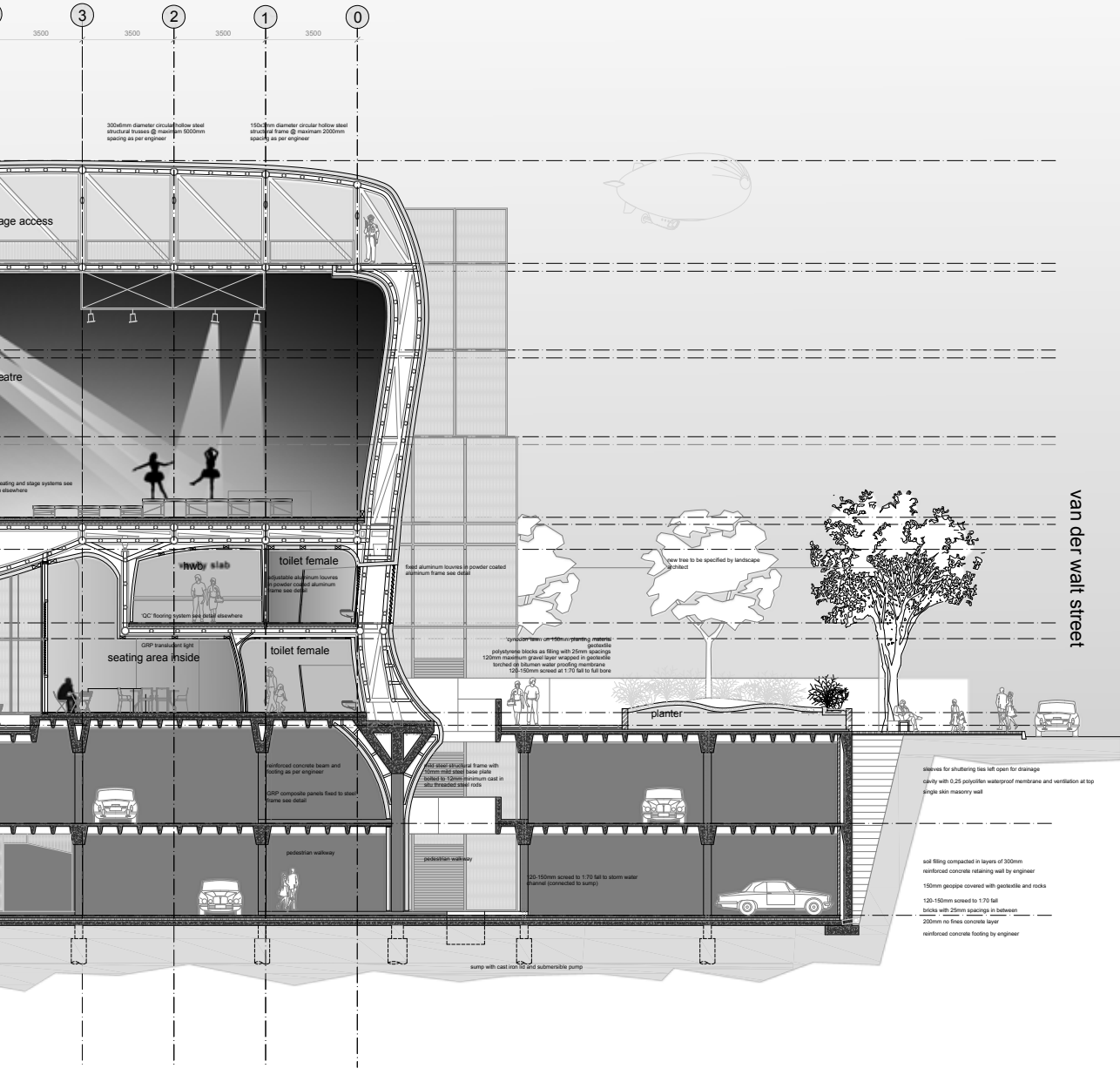




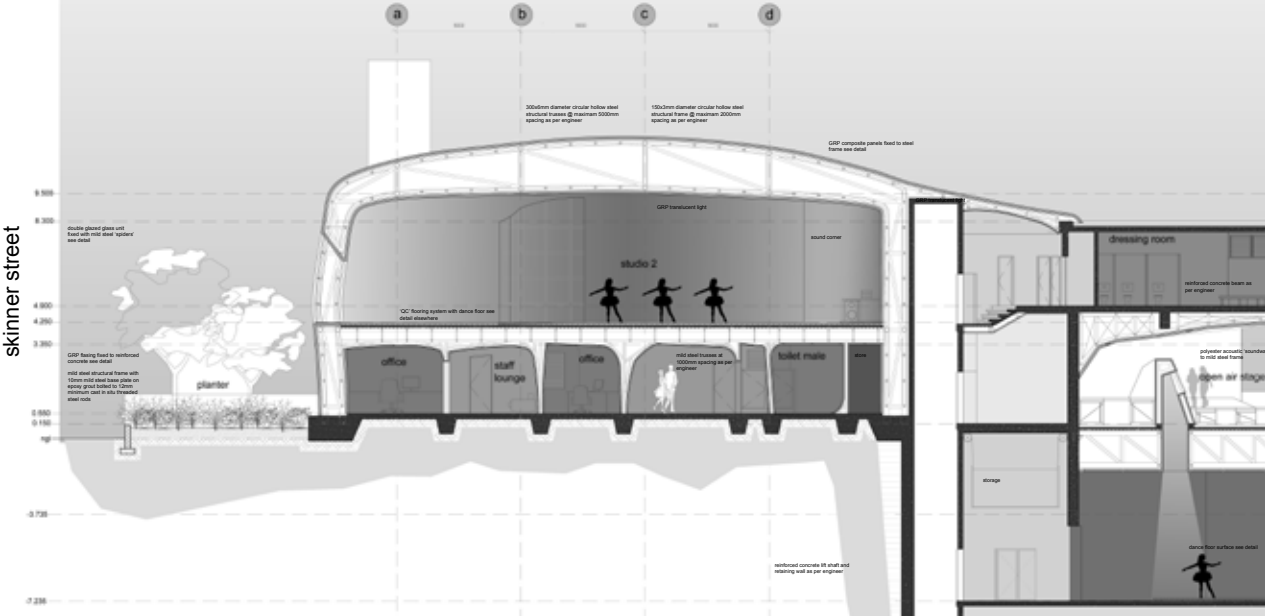
second floor plans



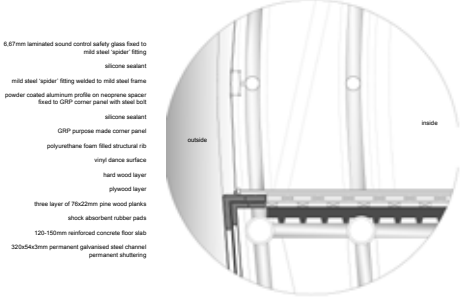
section a-a


3
2
1
0
3500
3500
3500
3500
300x6mm diameter circular hollow steel structural trusses @ maximum 5000mm spacing as per engineer
150x3mm diameter circular hollow steel structural frame @ maximum 2000mm spacing as per engineer
age access
eatre
eating and stage systems see elsewhere
hwb slab
toilet female
adjustable aluminum louvres in powder coated aluminum frame see detail
fixed aluminum louvres in powder coated aluminum frame see detail
'QC' flooring system see detail elsewhere
GRP translucent light
seating area inside
toilet female
new tree to be specified by landscape architect
van der walt street
'cylinder' beam on 150mm planting material geotextile polystyrene blocks as filling with 25mm spacings 120mm maximum gravel layer wrapped in geotextile torched on bitumen water proofing membrane 120-150mm screed at 1:70 fall to full bore
planter
reinforced concrete beam and footing as per engineer
GRP composite panels fixed to steel frame see detail
hot steel structural frame with 10mm mild steel base plate bolted to 12mm minimum cast in situ threaded steel rods
sleeves for shuttering ties left open for drainage
cavity with 0,25 polyolifen waterproof membrane and ventilation at top
single skin masonry wall
pedestrian walkway
pedestrian walkway
120-150mm screed to 1:70 fall to storm water channel (connected to sump)
soil filling compacted in layers of 300mm
reinforced concrete retaining wall by engineer
150mm geopipe covered with geotextile and rocks
120-150mm screed to 1:70 fall
bricks with 25mm spacings in between
200mm no fines concrete layer
reinforced concrete footing by engineer
sump with cast iron lid and submersible pump

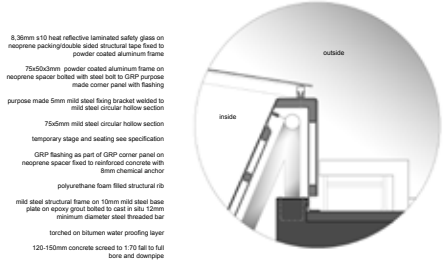
skinner street



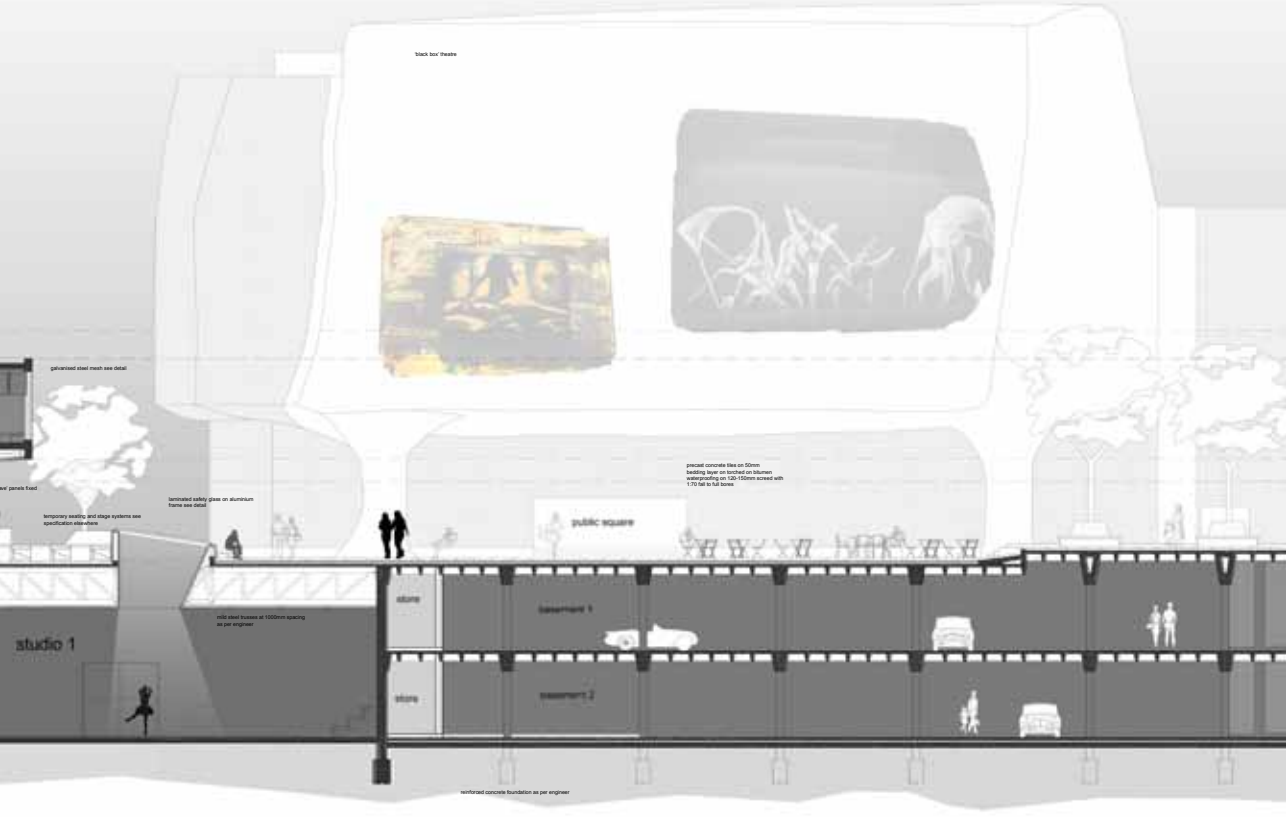
section b-b



glass surface detail



light detail



50mm thick 12-15mm gravel wear coarse

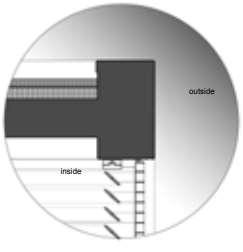
85mm insulating lightweight concrete screed to 1:70 fall to full bore and downpipe

torched on bitumen water proofing membrane

reinforced concrete slab

adjustable powder coated aluminum louvres in powder coated aluminum frame on neoprene spacer and fixed to reinforced concrete with 10mm chemical anchor

hot dipped galvanised welded steel mesh welded to 50x50x3mm cold formed steel equal angle frame fixed to reinforced concrete with 10mm chemical anchor



5mm polycarbonate double wall panels placed in extruded powder coated aluminum frame on neoprene spacer bolted to concrete screed with 8mm chemical anchor

120-150mm reinforced concrete floor slab with polished concrete finish

320x54x3mm permanent galvanised steel channel permanent shuttering

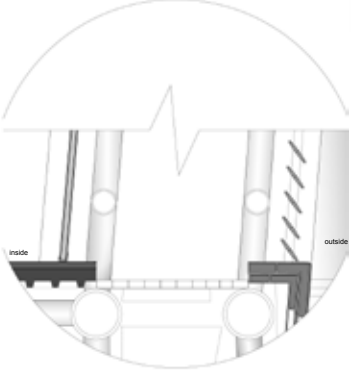
galvanised mentis grating in galvanised steel frame bolted to mild steel structural frame

fixed powder coated aluminum louvres in powder coated aluminum frame on neoprene spacer bolted to GRP corner panel with steel bolt

GRP purpose made corner panel

polyurethane foam filled structural rib

300x6mm mild steel circular hollow section as part of structural system

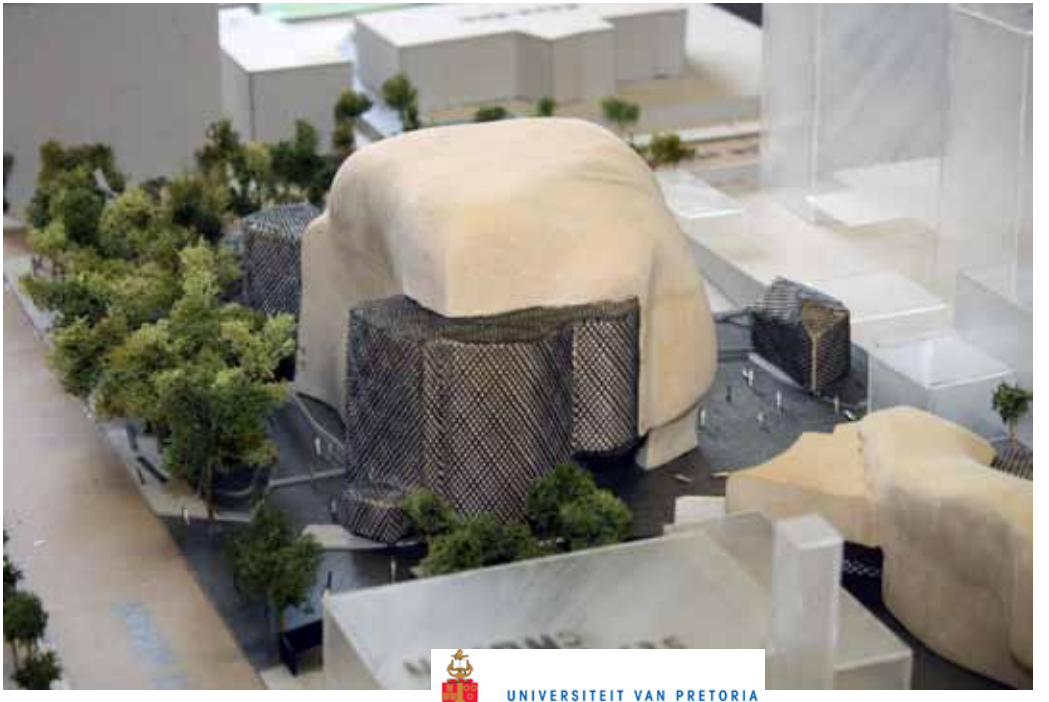


adjustable louvres detail

window or opening detail

addendum 2

images of conceptual model



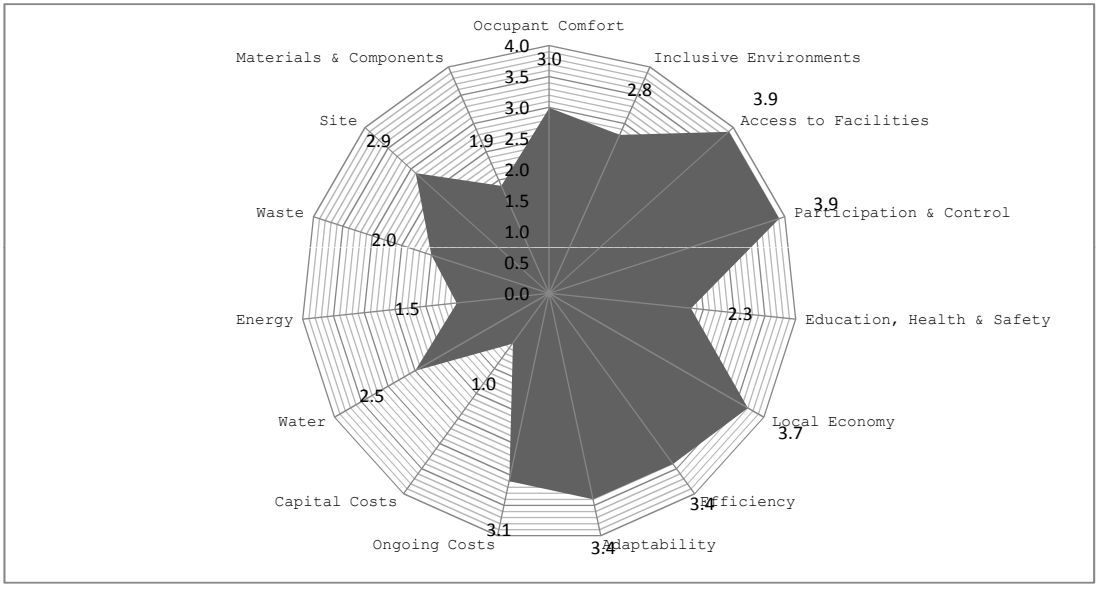
addendum 3

Sustainable Building Assessment Tool.

The objective of the tool is to provide an indication of the performance of a building or the design of a building in terms of

SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT- P) V1

PROJECT	ASSESSMENT
Project ti dance company and performance areas	Date: 19/10/2009
Location: pretoria	Undertaken by: R van der Westhuizen
Building t entertainment	Company / organisation: UP
Internal area (m2) 3350	Telephone: Fax:
Number of users: 100pph	Email:



Social	3.2	Economic	2.9	Environmenta	2.2

Overall	2.8	Classification	3.3

addendum 4

Notes on an interview done with: TANYA FUTTER. Done on 11 March, 2009 at Tshwane's University of Technologies arts campus.

- Choreography has two aspects: it conveys a message or theme through movement; or it is purely aesthetical.
- In Contemporary choreography there are no rules. It is an anything goes reaction and exploration against Classical Ballet and about pushing the boundaries of dance.
- The quality of the dancers has a large influence on the choreography and a good choreographer understands the limitations of his dancers and works with that.
- Is it necessary to intellectualise dance? Should it not just be entertainment?
- Contemporary dance uses contemporary music, from jazz to death metal.
- The process of choreography starts with an idea and is then further developed with play in the dance studio. A process of trial and error.

Notes on an interview done with: DEBRA C. GUSH. Done on 11 March, 2009 at Tshwane's University of Technologies arts campus.

- Choreography is an expression of something you want to create or build. Saying something with creation that does not have to be serious.
- Dance is a form of escapism for the audience. An escape from reality. Not suppose to be so serious.
- The symmetry of the eight-count is driven by the beat of the heart.
- The choreographed piece must have a symmetry that makes the audience feel like they have completed a circle.
- Choreography moved with the arts at the turn of the 19th century and went from being just escapism to acting like a real art and giving opinions and commentary on the everyday.
- Increased use of audio visual media's in dance. This is pretentious and removes the intimate interaction between the dancer and the audience. The Fan shaped theatre creates a connection with the audience.
- South African Contemporary dance is simple, self indulgent and takes the magic of the theatre away.

Notes on an interview done with: ANDRE VAN DER NEST. Done on 12 March, 2009 at the Montana's dance academy, Montana.

- A good choreographer has to be born with a good 'eye'. They must have some natural talent.
- The whole choreographed piece should intermingle.
- Choreographer has to work with the quality of dancers available, which is not that high in South Africa.
- South African Contemporary dance in 'los bandig' (all over the place).
- Different situations call for different choreography.
- Choreography has to come from the hart.
- Dance has gone backwards due to hip hop culture.
- There is not enough time to choreograph properly. Everything is always rushed and then the pride in product gets lost.
- There are too many shows.

Notes on an interview done with: TIMOTHY LE ROUX. Done on 13 March, 2009 at Tshwane's University of Technologies arts campus.

- Choreography is the composition of physical body in space. Momentum dictated by music.
- Works with the music as part of the process. The music can inspire the choreographer.
- Contemporary dance has to be more accessible it is to self indulgent, dull and superficial stage
- Dance must have discipline and some form of order.
- Classical dance makes things look easy.
- Contemporary dance challenges easy looking.
- Theatre in the round has more possibilities for choreographer.
- In the same way a painting is open for interpretation so is Contemporary dance open for interpretation.

Notes on an interview done with: SIFISO KWEYAMA. Done on 18 March, 2009 at Tshwane's University of Technologies arts campus.

- Choreographers are poets who tell stories with movement.
- Good choreographers make dancers to talk with their bodies.
- There is a difference between entertainment and performance.
- The process of choreography very important. Doing research and then making the dancers part of the process. Directs the choreography.
- Finds inspiration in movies.
- Dance is like life, it doesn't stay the same.
- The dancers have to find their own way. Anti Ballet where dancers are robots.