



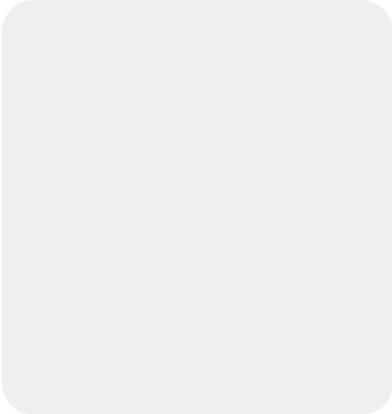
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A n U r b a n M u s e u m o f T y p o g r a p h y

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2011

George F. Pieterse

“ **WORDS** ^A_R^E
 **OF**
COURSE
THE MOST
POWERFUL
DRUG
USED
BY
MANKIND ”

RUDYARD KIPLING (2011)

Just a friendly warning. After reading this dissertation you may start to show symptoms of one of the following disorders:

Typophilia

“An excessive attachment to and fascination with the shape of letters, often to the exclusion of other interests and object choices. Typophiliacs often die penniless and alone.”

Typochondria

“A persistent anxiety that one has selected the wrong typeface and that this will lead to one’s complete discrediting as a designer and human being.”

Typophobia

“The irrational dislike of letterforms, often marked by a preference for icons, dingbats, and - in fatal cases - bullets and daggers. The fears of the typophobe can often be quieted (but not cured) by steady doses of Helvetica and Garamond.”

Lupton (2004: 154)

This volume is set using the *Adobe Garamond Pro* typeface. Designed by Robert Slimbach in 1989, it is a digital interpretation of Claude Garamond’s (c.1480 - 1561) original metal punch-cuts from the 1500’s.

Scripted

An Urban Museum
of Typography

by George F. Pieterse

Submitted in partial fulfilment of the requirements for the degree of
Master of Architecture (Professional)

Department of Architecture
Faculty of Engineering, Built Environment and Information Technology,
University of Pretoria, South Africa, November 2011

Study Leader: Derick de Bruyn

Course Coordinator: Jacques Laubscher

Dankie

Aan my Ma en Pa wat dit moontlik gemaak het vir my om my drome na te jaag vir die afgelope vyf jaar.

Aan die broers en die ching-chong-cha showdowns.

Aan Ouma Amor.

Aan die vriende vir die laat aand MacD's, die Toni's pizza, die rooiwyn, die bacon Kips, die roadtrips, die Boeremark, die kuiers, die whisky, die hubly, die gebitch, die gemoan en die gelag.

Aan die Meesterskinders vir die Fego koffies, die Boukunde-trap-skinders en die pity-parties. Misery loves company, en sonder julle sou die jaar baie moeiliker gewees het.

Laastens, dankie aan almal vir die onvoorwaardelike ondersteuning.

In accordance with Regulation 4(e) of the General Regulations (G.57) for dissertations and theses, I declare that this thesis, which I hereby submit for the degree Master of Architecture (Professional) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of my thesis has already been, or is currently being, submitted for any such degree, diploma or other qualification.

I further declare that this thesis is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.

George F. Pieterse

Project Summary

Programme:

Museum of Typography

Site Description:

Pretorius Square in front of the
Pretoria City Hall

Client:

Society of Typographic Aficionados,
Department of Arts and Culture and
Department of Public Works

Site Location:

Erf 2573 and Erf R/2575, Pretoria
CBD

Address:

151 Paul Kruger Street, Pretoria,
South Africa

GPS Coordinates:

25° 45' 11.04" S, 28° 11' 15.55" E

Architectural Theoretical Premise:

Investigating the propagation and
amelioration of Museum Space within a
South African context

Architectural Approach:

The design of a new inner city
museum together with the supporting
public space infrastructure

Research Field:

Urbanism and Human Settlements

“We do not have architecture, but rather, a part of us is architecture. Architecture is a way of being, just as science, art, and the other major cultural-forms are ways of being. So when we come to define the true and deeper functions of architecture, we will not be simply describing the production of a certain type of artefact, but explaining one of the original ways in which we know ourselves.”

Chris Abel (2000: 8).

ABSTRACT

Reading allows for the construction of a new world within the mind as one centralises and processes the literature. Flipping from one page to the next the language and the typography guides and informs this spatial construction and directs us through this new world. It creates an intangible architecture of the mind.

In the physical realm however, we experience the real world directly and blatantly without the aid of texts and narratives. In this life the relationship between text and space is inverted. Here text and narrative do not inform the construction and tactile experience of space but rather act as a backdrop to everyday life. It seems to go unnoticed.

This dissertation aims to emphasise the importance of typography, text and narrative within not only our day-to-day functionings, but also in the architectural realm. It seeks an amalgamation of typography, museum and public space, and aspires to create a place where the seemingly unnoticed typeface can be showcased, propagated and made accessible.

KEYWORDS: Museum Space, Public Space, Typography, Threshold, The Surface, The Everyday.

EKSERP

Soos wat teks en literatuur geïnternaliseer word, word 'n nuwe wêreld gekonstrueer in die geestesoo van die individu. Van die een bladsy na die volgende, gee die taal en tipografie aanleiding tot hierdie ruimtelike konstruksie en lei ons deur hierdie nuwe wêreld. Dit skep ast'ware 'n ontasbare argitektuur in die geheue van die leser.

In ons fisiese omgewing, word die wêreld egter direk en blatant ervaar, sonder die hulp van teks en narratief. In hierdie milieu is die verhouding tussen teks en ruimte omgekeer. Hier lei teks en narratief nie die konstruksie en tasbare ervaring van ruimte nie, maar tree terug en dien as agtergrond vir die alledaagse lewe. Dit bly ongesiens in die verbygaan.

Hierdie skripsie beoog om die belangrikheid van tipografie, teks en narratief binne ons alledaagse sowel as argitektoniese wêreld te beklemtoon. Die dokument streef daarna om 'n samesmelting van tipografie, museum en publieke ruimte te bewerkstellig, en beoog om 'n omgewing te skep waar die oënskynlik ongesiene 'letter', ten toon gestel, gepropageer en toeganklik gemaak kan word.

SLEUTELWOORDE: Museum Ruimte, Publieke Ruimte, Tipografie, Drumpel, Die Oppervlak, Die Alledaags.

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THANK YOU

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PROJECT SUMMARY

PROLOGUE

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1 INTRODUCTION

Museum

Noun

“...the preservation and interpretation of some material aspect of society’s cultural consciousness” (Encyclopedia Britannica, 2011).

“...a building in which objects of historical, scientific, artistic, or cultural interest are stored and exhibited” (Oxford Dictionaries, 2010).

Typography

Noun

“The study of the design and use of type, the objective of which is to make text as legible and visually attractive as possible, by choosing appropriate typefaces, font sizes and attributes, but also by means of page layout” (Heidelbergerdruckmaschinen.com, n.d.).

Language

Noun

“the method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way” (Oxford Dictionaries, 2010).

The written word is a very significant part of everyday life – it is hard to imagine a society without it. The written word provides navigation of both the tangible and intangible realms of life and urbanity. It allows us to obtain knowledge through printed and visual matter, and to navigate city streets, urban space and architecture by means of lettering and signage (Ambrose & Harris, 2006: 170). Writings can even aid in the navigation and understanding of ourselves in relation to space and to our physical and psychological landscapes.

It can be said that the written word and typography forms the spatial context in which language resides. It constitutes the building blocks of our verbal communication systems and gives form to speech. Ellen Lupton (Lupton, 2004: 1) proclaimed that “Typography is what language looks like”. Language is typography, and typography is language.

Analogously, architecture and the urban environment perform a similar two-step, with architecture constituting the “typographic” building blocks through which the urban “language” is understood. Umberto Eco (in Abel, 2000: 23) proposes that architecture as communicative tool can be compared to a linguistic model of language, thus architecture in itself can also be equated to this interrelationship, with space and spatial experience underpinning the “language” of the architectural tectonic. A hierarchy of communicative spaces are thus brought into existence (See Figure 1 - 6).

What if these communicative spaces could manifest in an architectural product that combines space, city and typography?

typography



Fig. 1: Typography forming the basic building blocks of words (Author, 2011).

building blocks

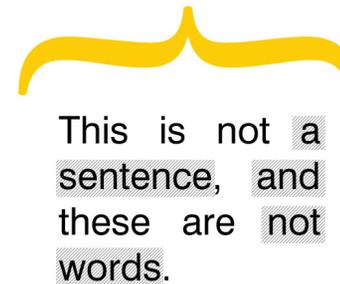


Fig. 2: Typography and words constituting the visual element of language (Author, 2011).

spatial context

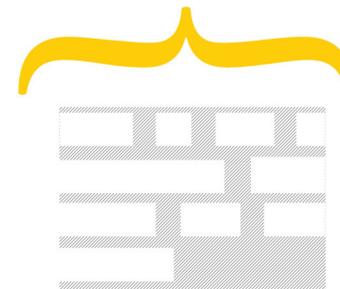


Fig. 3: The spatial matrix of language (Author, 2011).

typography

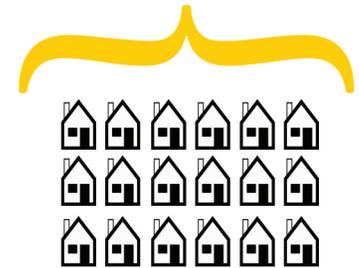


Fig. 4: Individual buildings constituting the typography of the city (Author, 2011).

building blocks

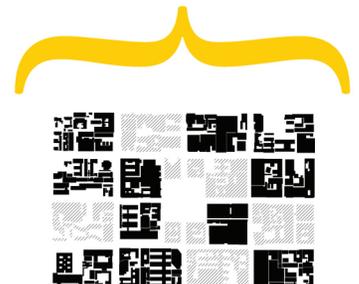


Fig. 5: Typographic building blocks through which the urban language is understood (Author, 2011).

spatial context

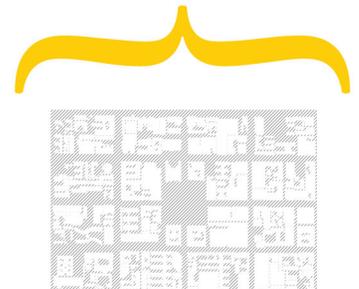


Fig. 6: The spatial matrix of the urban cityscape (Author, 2011).

1.1 BACKGROUND + CONTEXT

In a publication entitled ‘Museums of the World’ (De Gruyter, 2011), published in 2010, museums from all over the globe were profiled and studied. In this publication it was estimated that the total number of recorded museums in 202 countries around the world is around 55 000. Of those 55 000 museums, a total of approximately 300 can be found within South Africa (South Africa, n.d.) with 39 of these contained in the greater Tshwane (Museums Online SA, 2009) area ranging from art galleries and national museums to sites of cultural heritage.

According to Suzanne Macleod (2005: 2), “museums have come to be consciously recognised as drivers of social and economic regeneration” within cities and urban centres. She highlights the fact that museum space in itself is seen as active in the construction and formation of meaning and that museum space within our contemporary society is now, more than ever, open to change.

Within the Pretoria study area however, there is a need for the museum to be rethought as it is not as highly regarded as a catalyst for social regeneration¹. Physically taking up space in our city, but psychologically not occupying space in our minds, these museums seemingly exist as ‘non-places’². We neglect these buildings, physically and psychologically (See Figure 7-8).

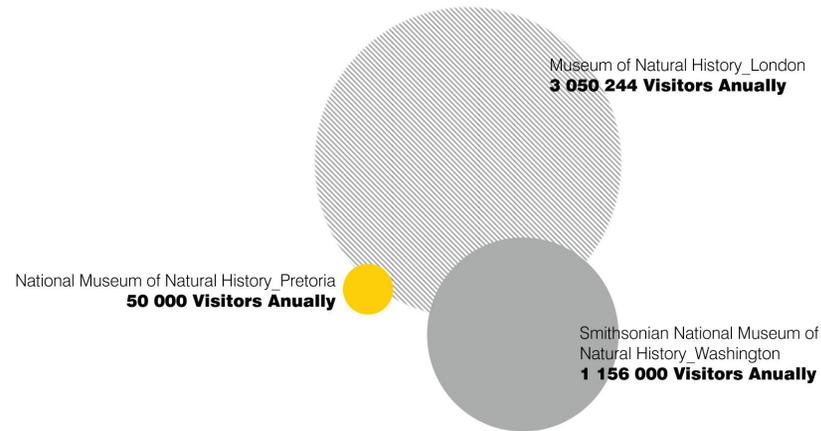


Fig. 7: The extremes: the lack of a museum culture in Pretoria with National Museum of Natural History as focus (Author, 2011; Data: Smithsonian Newsdesk, 2011; The National Archives, 2009).

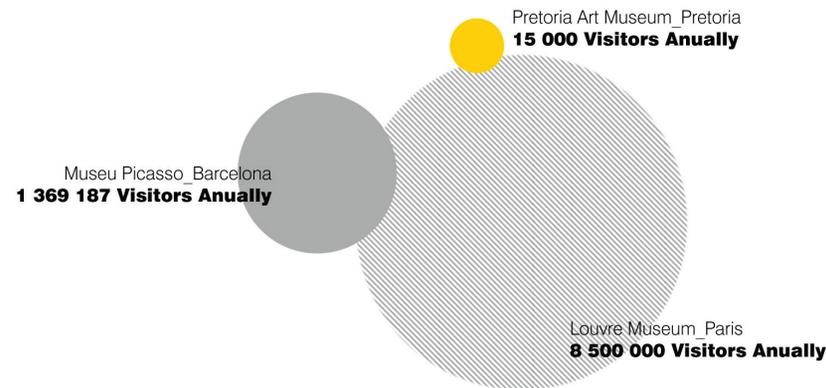


Fig. 8: The extremes: the lack of museum culture in Pretoria with the Pretoria Art Museum as focus (Author, 2011; Data: Pes & Sharpe, 2011: 26).

1. Museums are delegated to the outskirts of the urban centres, not forming part of inner city rejuvenation strategies (Rankin and Schmidt, 2009)

2. “Non-places” according to Marc Augé (1995: 103) are those spaces that are stripped of their identity and instead induce solitude and uniformity. Places that disappear into the urban fabric without being noticed by individuals, these are the true non-places of contemporary society.

A possible reason for this could be that most new-built museum buildings, within a South African context, are approached as homogenous and single-minded monuments to the past, void of civic integrity³ and that the older museums are 'abandoned' and left to fend for themselves amidst the (perceived) inner city decline. There are however vast numbers of inner city users that pass some of these buildings on a daily basis, but still do not interact with or make use of their facilities on offer⁴. Within a city of 39 museums, there seems to be no established museum culture (Rankin and Schmidt, 2009).

A supporting component in maintaining museum space is that of usable and meaningful urban public space. Public spaces within the Pretoria CBD are however limited and not all of them are being utilised to their full potential.

Within the Pretoria South CBD precinct, south of Skinner Street, there are only three accessible public spaces to be found⁵ (See Fig. 9).

The public space that this study will focus on is that of Pretorius Square in front of the City Hall and across from The National Museum of Natural History. This space offers vast opportunities for amalgamation into the public space matrix within the CBD, but is as of yet underutilised and unprogrammed.

3. The Apartheid Museum for example is built on the outskirts of Johannesburg, and so does not truly contribute to the enrichment of the urban fabric and public life of the city proper (Rankin and Schmidt, 2009).

4. This conclusion was reached after an extensive urban mapping exercise of the study area was conducted.

5. There are three accessible public spaces in the study area – Burgers Park, Pretorius Square and the public space in front of the Pretoria station. This conclusion was made after an extensive mapping exercise of the study area was done.

This dissertation aims to (re)introduce the celebration of everyday-life into museum space, and will also endeavour to establish the importance of communicative⁶ space. There is a need for a cross-pollinated and interlaced programmatic approach. Museums need to become true public spaces and in turn catalyse the production of meaningful and memorable urban public spaces external to themselves.

1.2 AIMS + OBJECTIVES

- This dissertation will question the validity of the museum typology within the context of Pretoria and endeavor to redefine this much needed societal and cultural establishment.

- David Fleming (2006: 59) believes that museums are not of the 'everywhere' but rather have to be highly contextual and embedded in the 'somewhere'. The proposed design will be approached from a strongly rooted contextual stance as the chosen study area is rich in significant tangible and intangible cultural heritage and any introduction of a new built product into the existing fabric will have to be done tactfully and sensitively – the opportunity to be bold yet perceptive in this process is however not entirely negated.

- The author will also investigate the extent of "museum space" and how the museum building itself can extend beyond its built confines in the form of public space, thus permeating the sphere of the social and the everyday.

6. Communicative: "Relating to the conveyance or exchange of information" (Oxford Dictionaries, 2011). The spaces and the architectural experience need to communicate to the visitor on all levels; from detailing and signage, to spatial experience and visitor interaction and most importantly, to the information on display.

- Identify the opportunities that arise from incorporating typography into the spatial experience and communicative aspects of architecture and urban space.

- The aim of the overall design product will be to celebrate, uncover and showcase different dimensions of typography, public space and architecture. The project will aspire to amalgamate museum space with that of public space, with the final design product being a museum with an integrated public landscape devoted to an everyday urban existence and the art of typography.

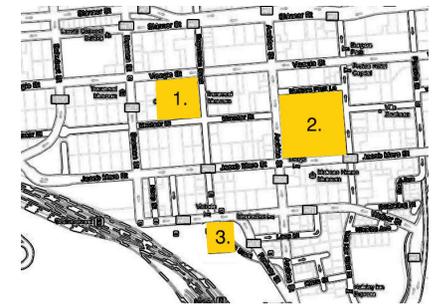


Fig. 9: Accessible public space. 1. Pretorius Square, 2. Burgers Park, 3. Pretoria Station (Author, 2011).

1.3 DEFINING THE PROBLEM

Within the study area of Pretoria, museums are not recognised as vital components to the continual re-making of society, of space and of place. These buildings are regarded as autonomous relics paying homage to, or being reminiscent of, a bygone era (Rankin and Schmidt, 2009).

Public space on the other hand is regarded as one of the key components to ensuring a balanced urban existence. Pretorius Square is however not fully appropriated by the public so as to afford it meaning and place within the everyday lives of individuals.

1.4 PROBLEM STATEMENT

Contemporary museum buildings, within a South African context, are approached as homogenous and single-minded monuments to the past, void of civic integrity (Rankin and Schmidt, 2009). Established museums take the approach of “passive experience” where the user is guided through display upon display of outdated and non-engaging exhibition material.

This dissertation will endeavour to illustrate that in order for this typology to regain its societal and civic importance it needs to start celebrating the ‘everyday’ and the ‘ordinary’ and shift the user experience to that of “active engagement” where the user becomes an intrinsic part of the museum experience. There seems to be a need for a cross-pollinated and interlaced programmatic approach – an amalgamation of museum space, public space and everyday life.

Public spaces are the connective tissue that ensures a cohesive urban existence. They allow people space to breathe, a place to escape to and a place where they can interact. They are a vital component to a healthy functioning urban society.

1.5 HYPOTHESIS

This dissertation envisions a redefined museum space and a museum typology that celebrates the everyday and is accessible to the everyman. This document will showcase the importance for museum buildings to function as true urban and social contributors.

Museums also need to become true public spaces and in turn catalyse and facilitate the production of meaningful and memorable urban public spaces external to themselves – they need to at once, be and create usable place. There is a need for a museum and public space rethink, for a redefinition of what these places and spaces are and what they mean to us.

The architectural intervention will also allow for typography to become an intrinsic part of the spatial experience of architecture.

1.6 RESEARCH QUESTIONS

- How does museum space and public space contribute to the formation of one another?
- How do architects ensure that ‘museum space’ becomes part of the everyday and resonates as a truly public place?
- What role do thresholds and the in-between play in architecture and how can it be utilised in order to enrich spatial experience?
- To what extent does typography and language affect the spatial experience of architecture?

1.7 DELIMITATIONS

- The study’s aim is to establish a new-built museum within Pretoria, and therefore the project will not aim to reinvigorate existing museum buildings directly but rather establish guidelines through the new design that could aid in future reinterpretation[s] of existing and new museum space.

- The investigation of public space will be limited to that of Pretorius Square. The findings and proposed strategies may thus not be applicable to all public spaces within the city.

- Through the research process it has been discovered that relevant South African literature on museum space is limited. Applicable international literature will thus form the main departure point in order to establish a South African response.

1.8 PROPOSAL

1.8.1 RESEARCH METHODOLOGY

CONTEXT ANALYSIS

A context analysis will be done of the immediate environs surrounding the proposed site of intervention. Various mapping exercises will be done which will inform various factors including (but not limited to) historical and cultural context, pedestrian influence, built character and building use, typology integration and access.

URBAN FRAMEWORK STUDY

An integrated urban framework study will be done in order to establish the wider contextual milieu within which the project will have to position itself.

This framework will include a thorough urban analysis and will propose future and current developmental and design guidelines.

STUDY OF PRECEDENTS

The author will draw on various forms of architectural precedent studies spanning over a variety of approaches and subject matter.

Contemporary international and local examples will be explored. The aspects that will be critically looked at are:

- Architecture + Typography
- Threshold
- Surface
- Old + New
- Public Space

STUDY OF TYPOGRAPHIC HISTORY AND DEVELOPMENT

A study will be done in order to get a more thorough understanding of typography, its origins and its classifications.

TECTONIC AND STEREOTOMIC EXPLORATION

Throughout the design process the relationship between the tectonic and the stereotomic will be questioned and explored, both between the existing context and the proposed new intervention, as well as within the spatiality of the proposed new architectural end-product.

1.8.2 THEORETICAL APPROACH

Theoretically the study will position itself within various approaches and scales – both architectural and urban.

Firstly, contemporary writings on ‘museum space’ will play a very significant role throughout the theoretical and design exploration of the project.

Secondly the theories of Henri Lefebvre regarding the “Everyday and the Ordinary” in spatial and architectural terms, will be investigated.

Theories about the “In-Between” and “Liquid Thresholds” form the third point of departure. Especially those propagated by Aldo van Eyck will be explored.

Supporting theories regarding the ‘writing of space’ will also be investigated.

Associations between typography, surface, architecture and public space will continually be investigated throughout the processes of conceptualization and design.

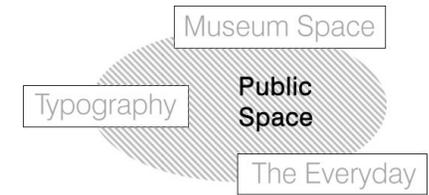


Fig. 10: Relationship between concepts - Public Space (Author, 2011).

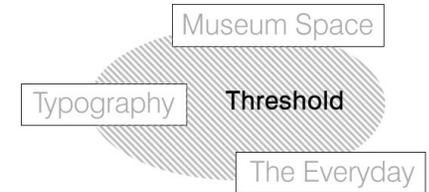


Fig. 11: Relationship between concepts - Threshold (Author, 2011).

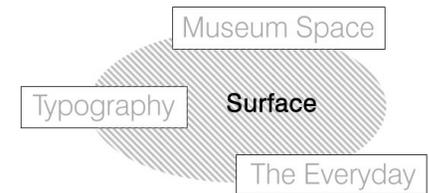


Fig. 12: Relationship between concepts - Surface (Author, 2011).

1.8.3 LOCATION

The study laboratory will be the City of Tshwane, more specifically the Museum Park precinct south of the CBD (see Fig. 13), with specific focus on the interstitial space between the City Hall and the National Museum of Natural History along Paul Kruger Street.



Fig. 13: Museum park precinct (Redrawn by Author, 2011).

1.8.4 TARGET POPULATION

Due to the proposed location of the intervention, the target population is exceptionally varied.

The site is at the moment mainly frequented by pedestrians that are in transit. These persons do not necessarily physically access the space but paradoxically they currently make up the largest user group of the site. These individuals commute along Paul Kruger Street in both directions as they make their way either to Church Square in the north or Pretoria Station in the south. Paul Kruger Street thus forms a very important activity spine within both the study area and the Pretoria CBD.

The intervention will consequently aim to provide an impetus for these persons to actively utilise and engage with the available public space as well as the proposed new built intervention.

The other user groups that will be provided for are the local residents in the area seeing as there is a strong residential component to the precinct. The precinct in itself is also highly mixed-use with various government departments and offices directly adjacent to the site. These users will have a different set of needs that will also be catered for.

Because of the communicative and information orientated character of the museum precinct, a very important number of the target population will also be school children, not only from the surroundings, but from the greater Tshwane area.

The enhancement of tourism in the precinct is a highly significant factor that will be considered as well, the aim here being to activate the site as a destination.

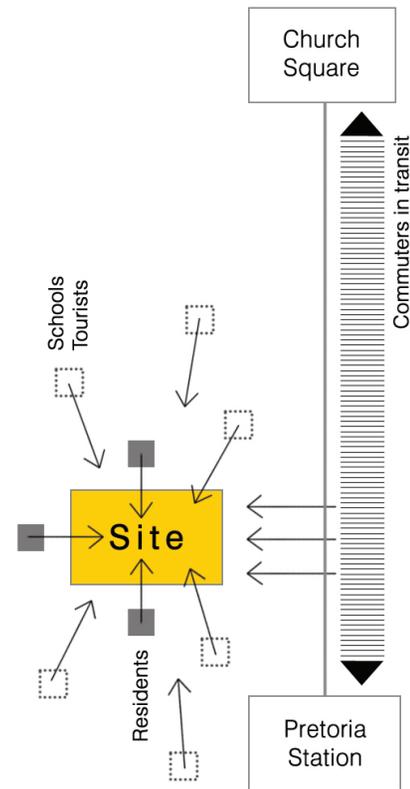


Fig. 14: Target population that will potentially benefit from the proposed intervention (Author, 2011).

1.8.5 CLIENT

The identified client structure for the envisaged project is a threefold consortium and is comprised of an international non-profit organization as well as two governmental departments.

THE SOCIETY OF TYPOGRAPHIC AFICIONADOS

The Society of Typographic Aficionados (SOTA) is an international non-profit organization dedicated to the study, promotion and support of type, its development and history, its use in the world of print and digital imagery as well

as its designers (SOTA, 2010). SOTA is committed to sponsoring and funding relevant programmes and projects that help to promote and develop these goals. SOTA will thus be the main client and funding body behind the project.

An annual international conference (TypeCon) that deals with all things type is also organized by SOTA. There exists a possibility to accommodate this conference within the newly proposed facility and urban framework (SOTA, 2010).

THE DEPARTMENT OF ARTS AND CULTURE

The Department of Arts and Culture, more specifically the branch of Arts, Cultural and Promotional Development, was identified as one of the possible clients due to the overtly cultural nature of the intended project. The department will provide additional funding and necessary project guidance as well as marketing opportunities for the project.

The department aims to develop and promote arts and culture within South Africa and emphasize its role in social, cultural and economic development. Developing and promoting the official languages of South Africa and enhancing the linguistic diversity of the country is also a main concern of this branch (DAC, 2006).

THE DEPARTMENT OF PUBLIC WORKS

The highly public orientated nature of the proposed project ensured the inclusion of the Department of Public Works as the third potential client, specifically focussing on the branch dealing with inner city rejuvenation projects.



Fig. 15: Booksetting (Alessandra, 2010). Books are the containers for letterforms and type, here however, the books themselves become the letterforms; the exploitation of an inherent duality is thus showcased. The same duality exists between landscape and architecture and the possibility for their entanglement is always present.

Site Location + Context



2 SITE LOCATION + CONTEXT

2.1 HISTORICAL CONTEXT

From Church Square, which is historically considered the centre of the Pretoria CBD, the city blocks of Pretoria were laid out in a rigid Cartesian grid expanding outwards in both a north-south and east-west axis. These axes were laid out so as to correspond to the geographical openings in the surrounding mountain ridges as well as to the sun's cosmic path.

Paul Kruger Street, which is the north-west axis or *cardo*, terminated in the Daspoort mountain range in the North and the Schurweberge mountains in the south. Church Street constitutes the east-west axis, or *decumanus*, and terminated at the crossing with the Apies River on the eastern side and the Steenhoven-Spruit on the western side.

The larger urban study area identified for this dissertation lays south of Church Street (*decumanus*) and is intersected by Paul Kruger Street (*cardo*).

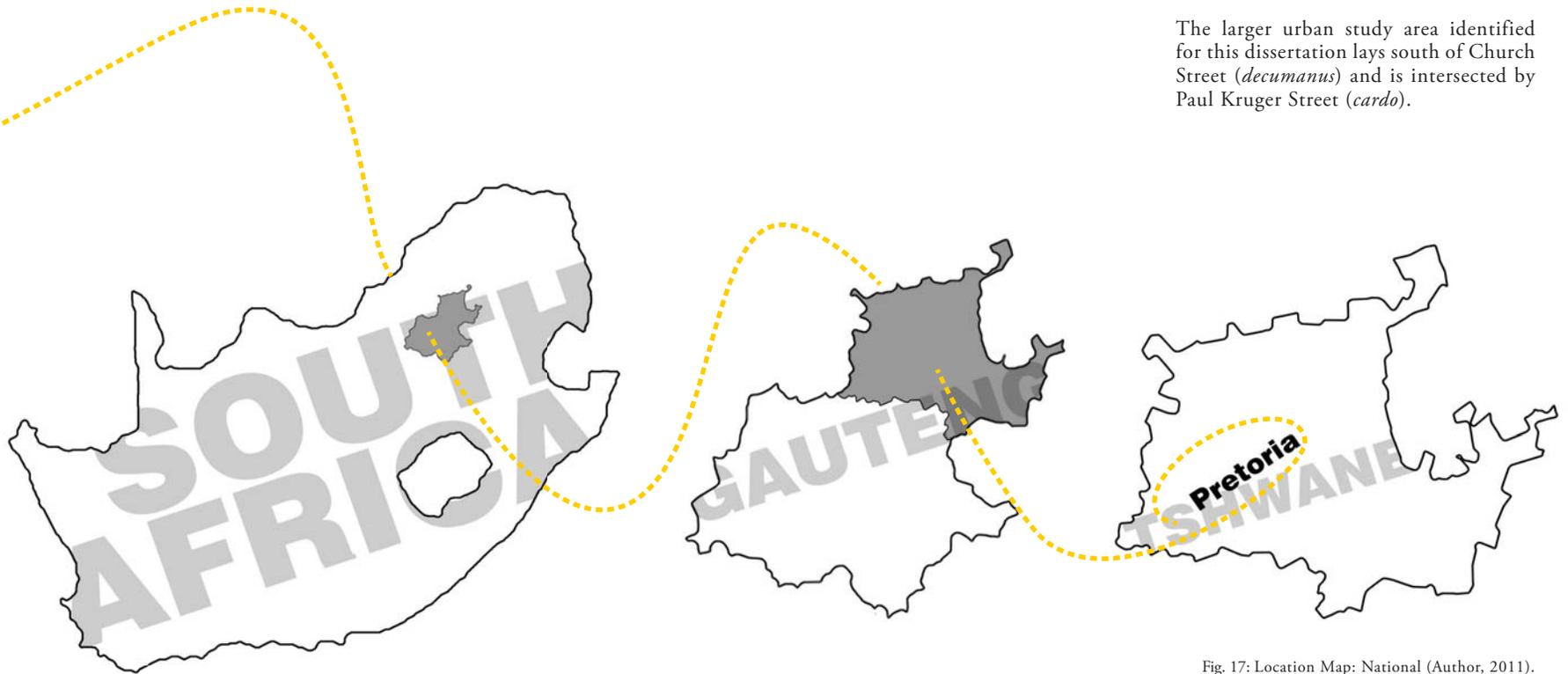


Fig. 17: Location Map: National (Author, 2011).

2.2 PRECINCT LOCATION

The precinct under investigation is clearly defined by both man-made and geographical boundaries. The study area in question is located between Skinner Street in the north, Nelson Mandela Drive in the east, the rail tracks and Salvokop to the south, and Potgieter Street to the west. For the rest of this dissertation this precinct will be referred to as The Burger's Park Framework (BPF) precinct .

Within this precinct, the Museum Park development is also situated. Museum Park is a development that was initiated by the government in the early 90's but was abandoned shortly after with only a few of the envisioned goals realised. The Museum Park is bordered by Visagie Street in the north, Van der Walt Street in the east, Minnaar Street in the south, and Schubart Street in the west (see Fig. 2). The Park includes the National Cultural History Museum, City hall and Pretorius Square, the National Museum of Natural History, Burger's Park and Melrose House.

KEYWORDS:

- Museum typology
- Museum park district
- High Pedestrian activity
- Unique sense of place compared to the rest of the CBD
- Closely located to CBD, but still has a human scale
- Suburban within urban area, very liveable space
- Historical importance
- Critical role in the urban context of the CBD
- Gateway to the city

The Burger's Park framework (BPF) area was chosen due to its high potential for re-appropriation and re-activation. Within the BPF there is both a well established residential community and an urban fabric that is highly mixed-use in character and well balanced. The precinct is also decidedly culturally orientated, therefore it supports the envisioned programme for the proposed intervention. This area does however have presiding problems, challenges and opportunities that are unique to itself, thus creating a remarkable study laboratory for exploration and creativity to flourish.



Fig. 18: Study area - Pretoria South CBD (Author, 2011).



Fig. 19: Museum Park precinct within study area (Author, 2011).



Fig. 20: Figure ground illustrating site selection within study area. (Author, 2011).

2.3 MAPPING

In order to get a better understanding of the precinct and its functionings, an extensive mapping exercise was done.

The mapping exercise allowed for the identification of the various problems and opportunities that are associated with the study area, thus ensuring better informed design decisions.

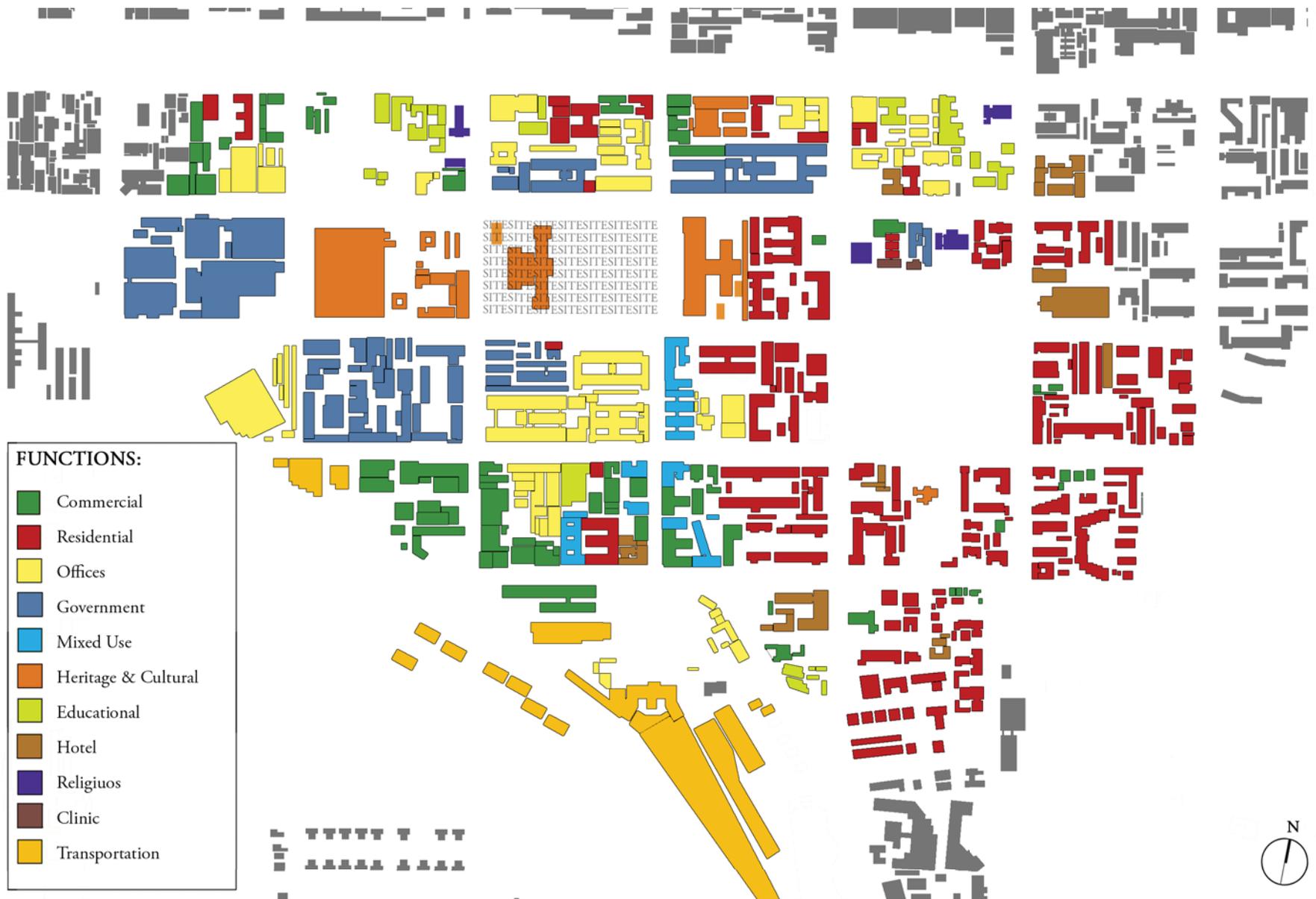
These observations and findings were then processed and distilled into a comprehensive urban framework proposal for the newly envisaged precinct.

The elements of the precinct that were studied are:

- Building Functions
- Pedestrian Activity
- Parking
- Typography
- Surfaces and Textures

Also, see Addendum B for:

- Public Transport + Routes
- Gautrian Bus Routes
- Boundaries + Nodes
- Edges + Access
- Private Transport + Routes
- Public Space Network



FUNCTIONS:

- Commercial
- Residential
- Offices
- Government
- Mixed Use
- Heritage & Cultural
- Educational
- Hotel
- Religious
- Clinic
- Transportation

Functions

Observation(s)_

Very good mixed use characteristic per city block within precinct. Lack of community functions. Existing museum buildings not functioning optimally.

Proposal_

Introduction of more mixed use functions per individual building. Reconsider community functions within precinct as well as museum functions.

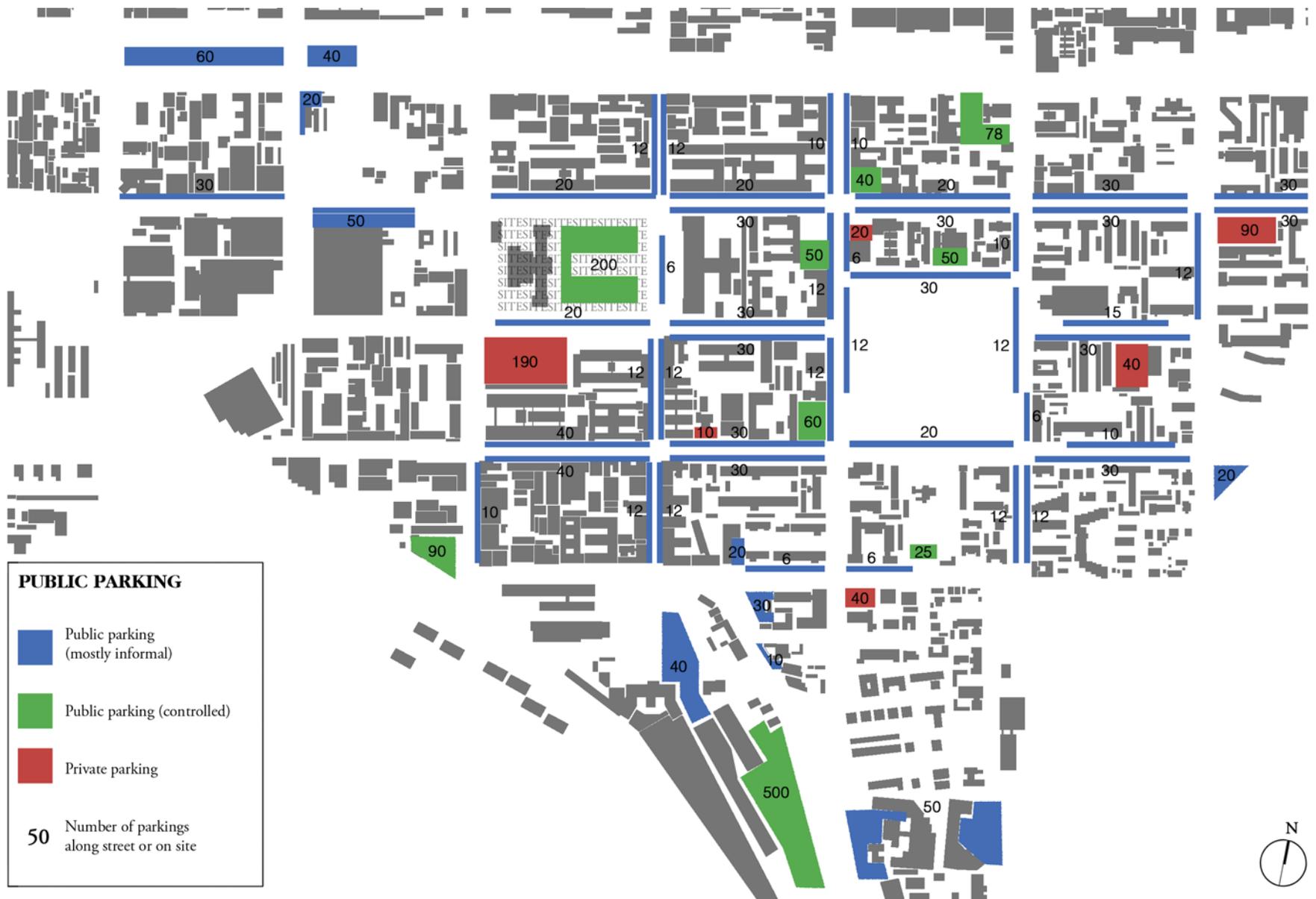
Fig. 21: Mapping - Illustrating functions of buildings within study area (Author, 2011).



AVERAGE DAYTIME PEDESTRIAN ACTIVITY
05H00 - 18H00

Pedestrian Activity_Daytime
Observation(s)_
 Paul kruger street forms main pedestrian thoroughfare through precinct due to link with Church Square and Pretoria station. Bosman and Andries street form secondary routes. Minnaar street is underutilized.
Proposal_
 Activate Minnaar street as main east-west pedestrian route within precinct. Also activate night time pedestrian activity, as the current pedestrian numbers during the evenings are negligible.

Fig. 22: Mapping - Illustrating pedestrian activity within study area (Author, 2011).



Private Parking

Observation(s)_

Limited parking within precinct. With the new developments proposed within the framework, parking is going to be severely compromised.

Proposal_

All new developments to accommodate more parking either by basement parking or through other strategies. Possibility to have centralised parking strategy.

Fig. 23: Mapping - Illustrating parking facilities within study area (Author, 2011).

2.3.1 MUSEUM PARK PRECINCT A PRECINCT OF TYPOGRAPHY

A typographic survey was conducted within the study area in order to determine the prevalence of type and letterforms within the urban environment. The aim was also to establish to what extent an individual navigates the city in relation to these typographies.

It was found that the urban environment is almost entirely navigated through the reading and interpretation of signage and letterforms. For an individual, the city (if completely unfamiliar to him/her) would be nearly illegible if there wasn't guidance through the use of type.

Through the study, it was also concluded that the prevalence of type within the precinct is extremely high, especially along the Paul Kruger street axis with its high commercial and retail activities.

Through these letterforms and signage, the urban landscape conveys a narrative and it tells a story of place, of identity and of everyday life (see Fig. 23).



Fig. 24: Paul Kruger Street signage (Author, 2011).

Fig. 25: Next page: The typographies of the Museum Park Precinct (Author, 2011)



Type can tell us what to do...



eringe is om voetgangeroegan gebou en die Gautrain Pretoria r ter wille van 'n beter integrasie re verkeer tussen die bestaande er regstasies en om die areas ngers gebruik word op te gradeer. esonderhede aangaande die vo leringe is ter openbare insae beske ASA kantore, 546 Paul Krugerstraat Pretoria, 0001, gedurende kantoor



...and what not to do...



Type can have character...



...or be utilitarian...



...or austere...



Type can be permanent...



...or temporary...



Type can help us find our way...



...or be confusing.



Type can make one thing...



...different from another.



Type can be informal...



...or formal...





Type can be crude...



...or elegant.



Type can help us improve our health...



...and feed the masses...



...clothe us...



Type can give identity...



...and take it away.



Type can connect us...



...and make us enemies.



Type can help us escape...



...or guide us on our way.



Type can signal change...



...or reflect on the past.



Type shapes our environment...



...it is here...



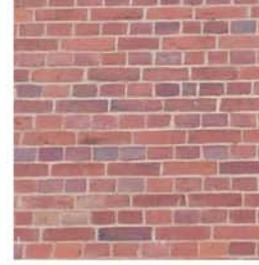
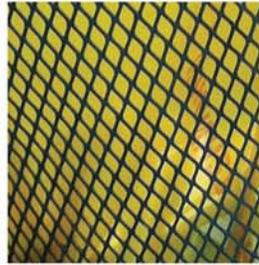
...there...

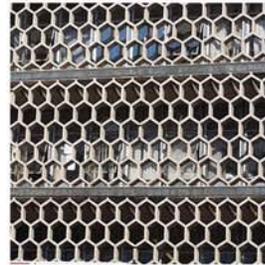


...it is everywhere.

2.3.2 MUSEUM PARK PRECINCT THE SURFACES AND TEXTURES

Fig. 26: The surfaces and textures of the Museum Park precinct (Author, 2011).





2.4 URBAN DESIGN

It would be idealistic for architects and urban designers to postulate that a single intervention, either on architectural or urban scale, would be able to solve all the problems facing humanity today. Architecture and urban design does however have valid and significant contributions to make, but can only be the catalyst and create the impetus for this change.

The social fundamentals on which the South African city is built is largely dependant on that of choice and the ability to choose. According to Fred Inglis (Bentley & Watson, 2007: 7), choice is seen as the 'supreme value' within developing countries and allows the individual to be filled with a sense of purpose and identity. A recent World Bank survey found that the necessity and the ability to choose ranked as the essential factor for well-being (Bentley & Watson, 2007: 8).

Allowing for choice rather than an absolute solution should be the starting point of an urban proposal within a South African context. A South African model for a new urbanity should allow for, and accommodate, the social needs of its citizens, respond to them and be flexible.

2.4.1 VISION + AIMS

- Promote and establish a unique environment with a well defined and culturally orientated identity.
- Establish an environment that promotes the importance of the pedestrian, through ease of movement as well as the potential to linger.
- Allow museums to be re-appropriated by the public and once again establish the typology as that of the public.

- Focus on the users and on social exchange. A high level of accessibility should be promoted and the precinct must have well defined public spaces.
- Ensure a high degree of flexibility and choice throughout the precinct and its built fabric.

1. Minnaar street termination
 Poor spatial origin for prominent road within precinct

2. Minnaar street / Schubart street intersection
 Dangerous for pedestrians and unarticulated

3. Crossings within precinct
 Orientated towards vehicular use

4. Current museum buildings
 Severely underutilised and neglected

5. Palisade fences and brick walls
 Prevents urban and pedestrian appropriation of space

6. Underutilized and vacant lots
 Degrades urban character of precinct

7. Taxis along Jacob Mare street
 Creates dangerous urban edge to street

8. Government Buildings
 All government, office and institutional buildings to have public interface ground floors

9. Block thoroughfares
 Poorly defined and severely under utilized arcades

10. Pretorius square
 Poorly functioning public space - no established hierarchy

11. Pretorius square / Paul Kruger street edge
 Threshold condition to be re-evaluated. Better integration between street, square and pedestrian.

12. Paul Kruger street
 Street and edges need revision in order to improve pedestrian environment

13. Informal off-street parking
 Street edge definition and pedestrian environment compromised

14. Buildings close to Pretoria Station
 Densities too low to accommodate increased economic activities from Gautrain

15. Pretoria Station crossing
 Dangerous for pedestrians and unarticulated - lacks "gateway" to precinct

2.4.2 URBAN PROBLEMS IDENTIFIED WITHIN PRECINCT

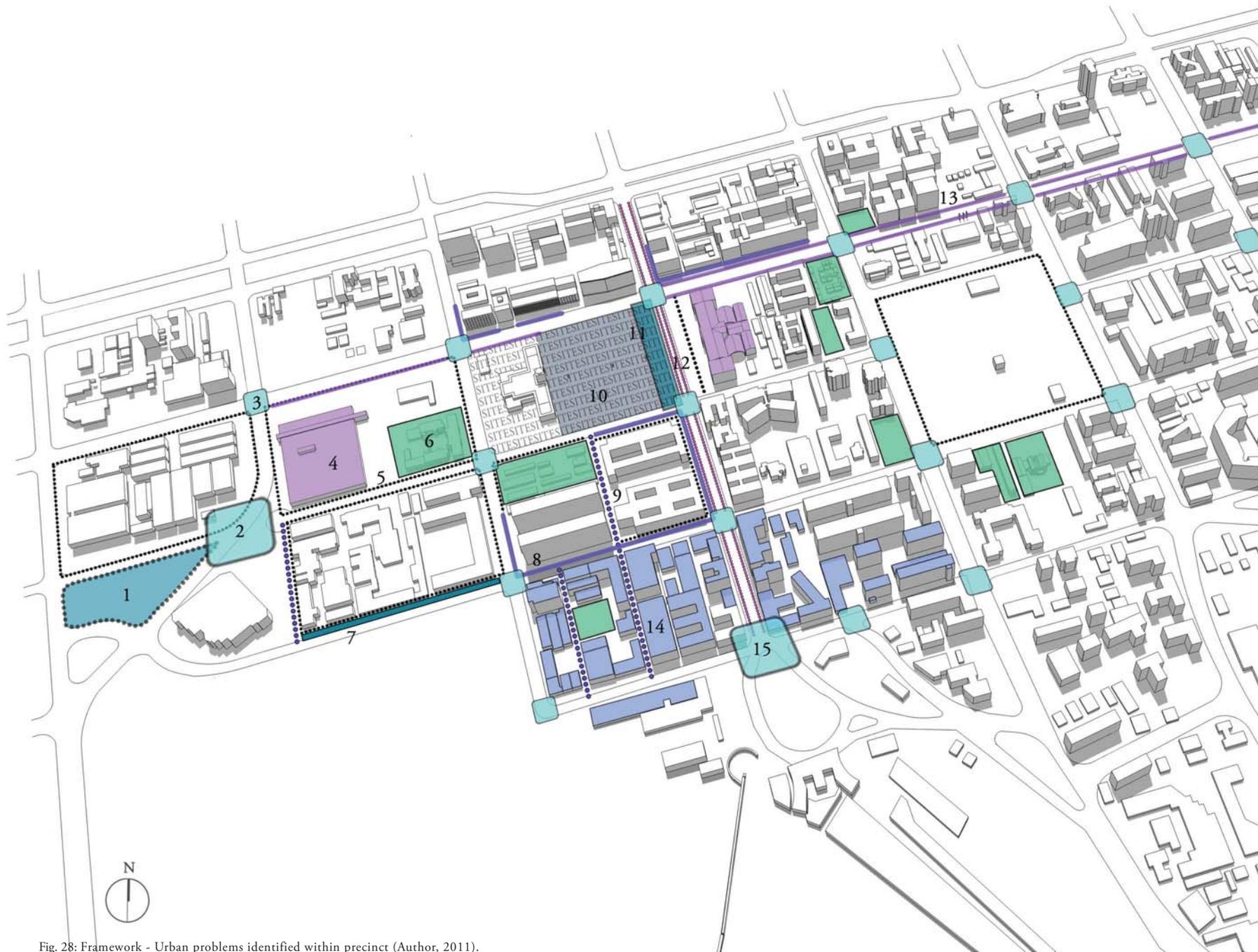


Fig. 28: Framework - Urban problems identified within precinct (Author, 2011).

1. Minnaar street termination
 New civic space and anchor node to be established.
 Post office building to be demolished and relocated
 to Post office precinct west of Potgieter street

2. Minnaar street / Schubart street intersection
 Crossing to be articulated and made highly
 pedestrian orientated

3. Crossings within precinct
 Articulated and orientated towards pedestrian use

4. Existing museum buildings
 Museums to be fully refurbished and modernised.
 What is exhibited needs to be showcased and
 propagated to the public.

5. Palisade fences and brick walls
 Boundaries to be removed to allow for better spatial
 utilisation and amalgamation

6. Taxis along Jacob Mare street
 To be accommodated in newly developed taxi rank
 south of Jacob Mare street

7. Government Buildings
 All government, office and institutional buildings to
 have public interface ground floors

8. Block thoroughfares
 Connection between city, pedestrians and public
 space need to be considered

9. Pretorius square
 Square to be programmed and hierarchy to be
 introduced

10. Pretorius square / Paul Kruger street edge
 Edge to be amalgamated and activated

11. Informal off-street parking
 Parking to be landscaped and formalized in order to
 improve identity and character of precinct

12. Buildings close to Pretoria Station
 Replacing existing low-rise structures with high
 density mixed use buildings

13. Pretoria Station crossing
 Crossing to be articulated and made highly
 pedestrian orientated. Establishment of gateway
 into precinct is necessary



Fig. 29: Framework - Interventions + opportunities identified within precinct (Author, 2011).

1. Minnaar street termination

Creation of a new pedestrianised anchor node. The node will include new landscaped areas as well as new cultural facilities

2. Relocation

New site for the relocation of the Pretoria Art Gallery

3. Minnaar street / Schubart street intersection

Crossing to be paved in order to facilitate a change in texture as well as level. Current termination of Minnaar Street to be non-mountable

4. Reprogramme

Government Printers to be reprogrammed in order to interact with the new node as well as gain museum / educational functions

5. Crossings within precinct

Crossing to be paved in order to facilitate a change in texture as well as level in order to indicate the predominance of pedestrian use

6. New cultural / civic building

Existing structures to be demolished and underutilised site to be developed. Program to be cultural / civic based and highly public in nature. Building height to be between 7 and 9 storeys. Public parking to be included

7. Block thoroughfares

Thoroughfares to be articulated as arcades. Building interfaces and landscape to be dealt with so as to appropriate these spaces.

8. City Hall

City Hall to be reprogrammed to function as Tshwane Public Forum and provide information on events in Tshwane. Housing of Tshwane tourist office and Museum Park head office. Provide overall coordination and information of all existing and available events and event spaces in the precinct.

9. Paul Kruger street

Sidewalks along Paul Kruger Street to be extended by one lane on each side in order to better facilitate informal trade as well as flow along the Paul Kruger axis. Boulevard to be created through the addition of a pedestrianised island in the middle of the road. Landscaping to be dealt with as appropriate

10. BRT Station

Proposed location of new BRT Station to move one city block to the north

11. Vacant / underutilised lots

Vacant sites to be developed. Buildings to be highly public in nature with the building height in accordance with existing built fabric

12. Buildings close to Pretoria Station Western block

Building densities to be increased and reprogrammed as mixed use high density development. Perimeter blocks to define street edge with a building height of 5-10 storeys

13. Pretoria Station crossing

Crossing of Scheiding Street to be adapted as to facilitate high levels of pedestrian movement

14. Buildings close to Pretoria Station Eastern block

Building densities to be increased and reprogrammed as mixed use high density development. Buildings above 5 storeys to be considered for adaptive re-use

15. Melrose House

Bicycle rental facilities to be provided

2.4.5 SELECTED SITES AND ASSOCIATED PROGRAMMES WITHIN FRAMEWORK

1. Isabel van Wyk

A Centre for Architecture

2. George F. Pieterse

A Museum of Typography

3. Gavin Williams

Burger's Park Opportunity Platform

4. Alexia Philippou

A Community Creativity Facility

5. Deirdre Marais

Soup Kitchen and Dance Centre

6. Heinrich Olckers

An Urban Transition Space

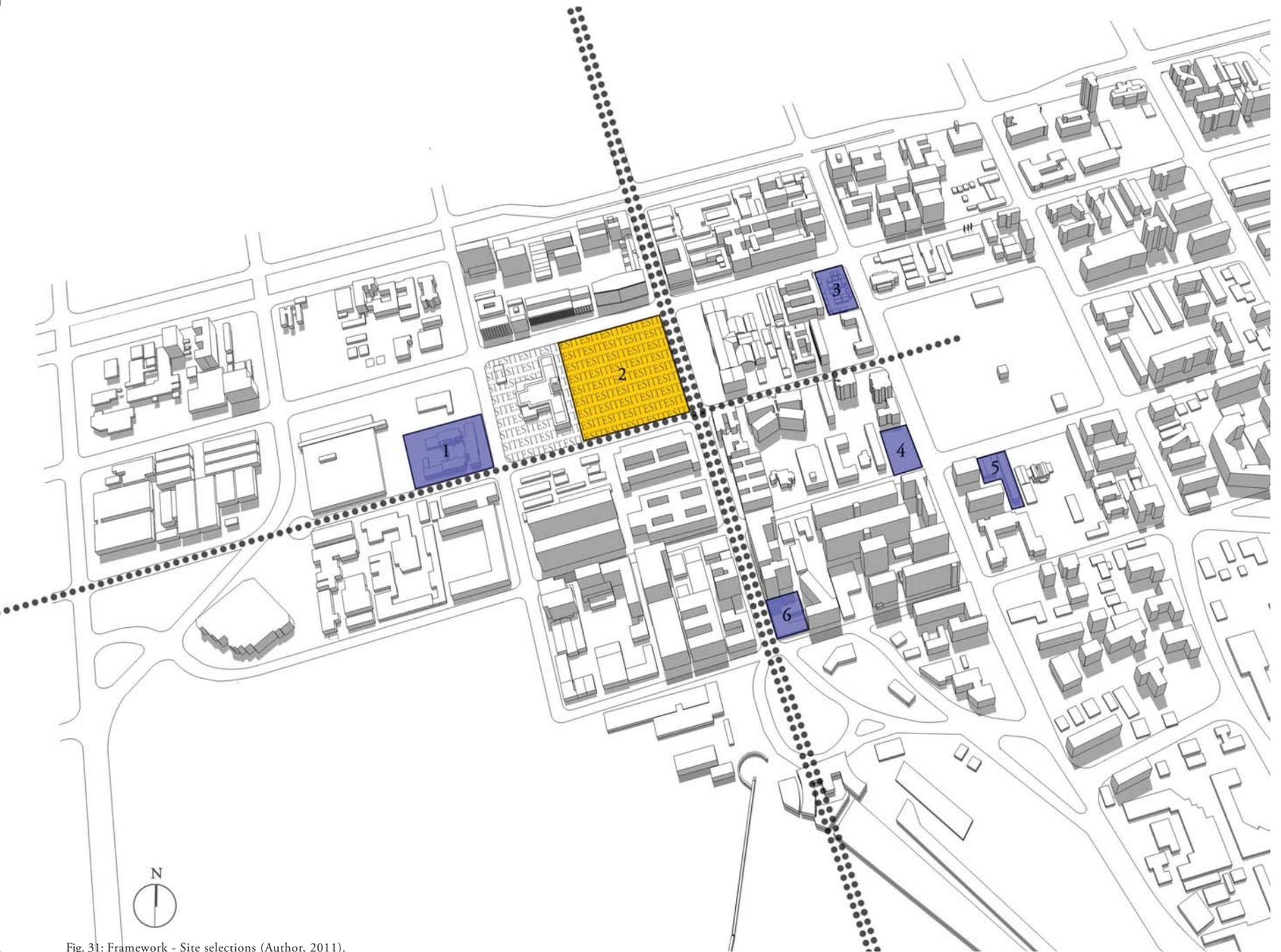


Fig. 31: Framework - Site selections (Author, 2011).

2.5 IMMEDIATE CONTEXT

2.5.1 SURROUNDINGS

CITY HALL (1)

The first corner stone of the City Hall was laid in 1931, with the building being completed in 1935 (le Roux, 1993: 33). The building was commissioned as part of a competition process and was done in celebration of Pretoria obtaining its city status.

The competition was won by F.C. McIntosh, who designed this Neoclassical building in 1926. McIntosh however passed away before the construction began and so the project was continued by his assistant John Lockwood-Hall (van der Waal, 1995: 18).

The building's front facade is built from granite with the back end towards Bosman Street consisting of plaster work.

The two main elements within the facade of this imposing building are the clock tower and pediment. The pediment was designed by Anton van Wouw and depicts the history and development of Pretoria (Da Costa, 2007: 16). The building looks out onto a garden formerly known as Pretorius Square.

PRETORIUS SQUARE (2)

Pretorius Square is a formal garden that sits in between City Hall and the National Museum of Natural History along Paul Kruger Street.

The landscape itself has little or no heritage value (Bakker, 2011) except for the strong visual and axial connection between the City Hall and the Museum of Natural History. It is thus the inherent characteristics of the intangible space between these two buildings that carry heritage value, and not the physical elements occupying the space.

There are three statues along the ceremonial axis, with the oldest two being of the Voortrekker leaders Marthinus Pretorius, who established Pretoria in 1855, and his father Andries Pretorius (Da Costa, 2007: 16). A third bronze statue was erected in 2006, that of Chief Tshwane. These statues (as isolated objects) does have heritage value, but their validity in their current context is questionable (Bakker, 2011). The possibility of relocation is thus investigated.

1. City Hall
2. Pretorius Square
3. Statue of Chief Tshwane
4. Statue of Andries Wilhelmus Jakobus Pretorius
5. Statue of Martinus Wessel Pretorius
6. National Museum of Natural History
7. National Department of Public Works
8. Tshwane Metropolitan Police Department
9. Lisa's Place Housing
10. The Land Bank Building
11. The Bank of Lisbon and the South African National Defence Force
12. Paulhof Building - Retail and Housing
13. NZASM Building - Spoornet
14. Old railway building -

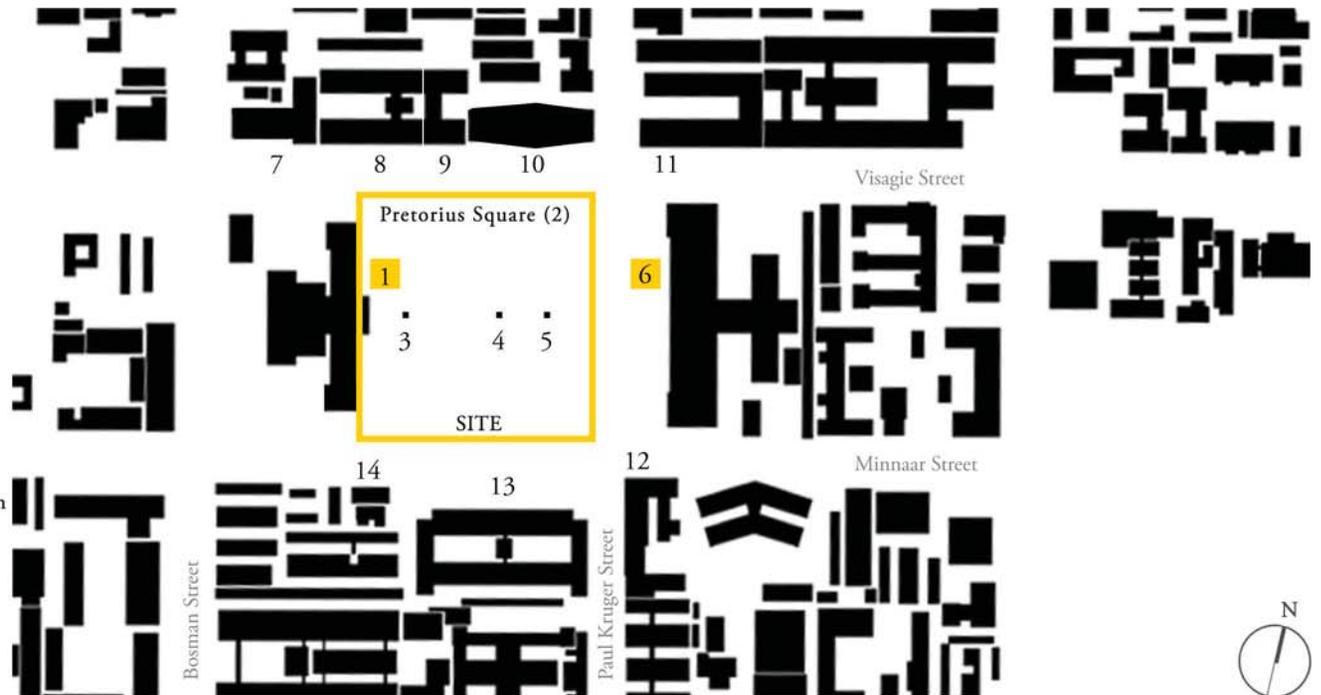


Fig. 32: Site and surrounding buildings (Author, 2011).

THE NATIONAL MUSEUM OF NATURAL HISTORY (6)

This Neoclassical sandstone building sits on the Eastern edge of Pretorius Square across Paul Kruger Street. The building was designed by architect J.S Cleland and built between 1910-1912. The original plans proposed two additional wings on the northern and southern sides of the building - these were never realised (Da Costa, 2007: 17). In 1995, Holm Jordaan Architects from Pretoria designed and built these two planned extensions (Bakker, 2011).

The additions extended the existing wings and were built using clay brick masonry mimicking the existing neoclassical features of the main building.

2.6 SITE: PRETORIUS SQUARE

Pretorius Square is flanked by the City Hall on the western edge and by the National Museum of Natural History on the eastern edge. Because of the orientation of these two buildings there exists a very strong and prominent axis that runs east-west across the site that attempts to connect the two buildings. The space is also intersected from north to south by Paul Kruger Street.

Pretorius Square also takes up a big portion of urban space but does not seem to 'occupy' this space successfully (le Roux, 1993: 32). The urban expanse of space is too big to sustain and nurture any appropriation into the spatial matrix of the city. The space lacks a clear sense of hierarchy and programme.

The square is also the only edge interruption to be found along Paul Kruger Street which has a highly built-up and well defined street edge stretching from the Pretoria Station all the way north to Church Square.

This characteristic affords it a vital role within the open-space network of the inner city - a role that is as of yet, underutilised. The edges of the square are also very ineffectively defined leading to the space bleeding off into the streets; the exception being that of the Western edge which is defined by the City Hall.

The space is in need of the establishment of hierarchy, the introduction of programme, the definition of edges, and the founding of thresholds.

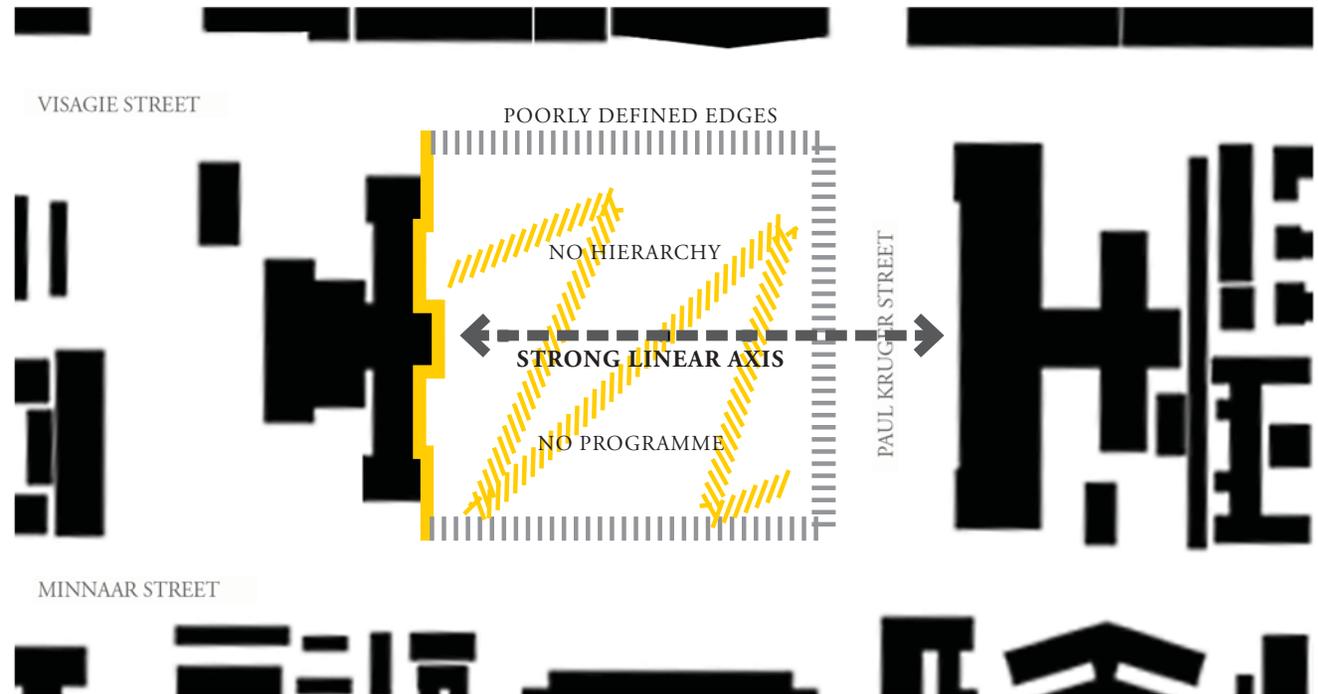


Fig. 33: Site - Identified characteristics of site (Author, 2011).

2.6.1 LOCALISED SITE VIEWS

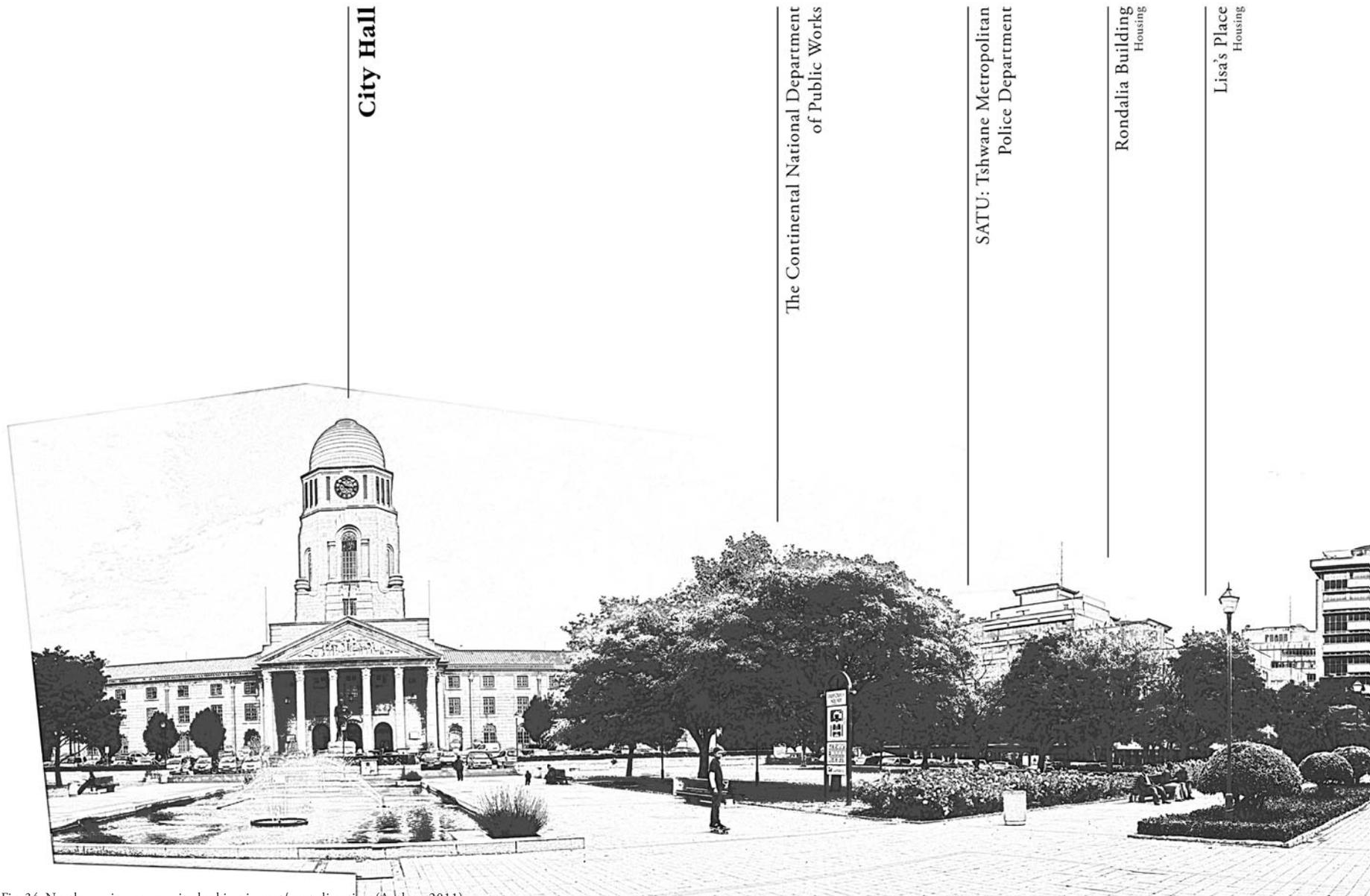
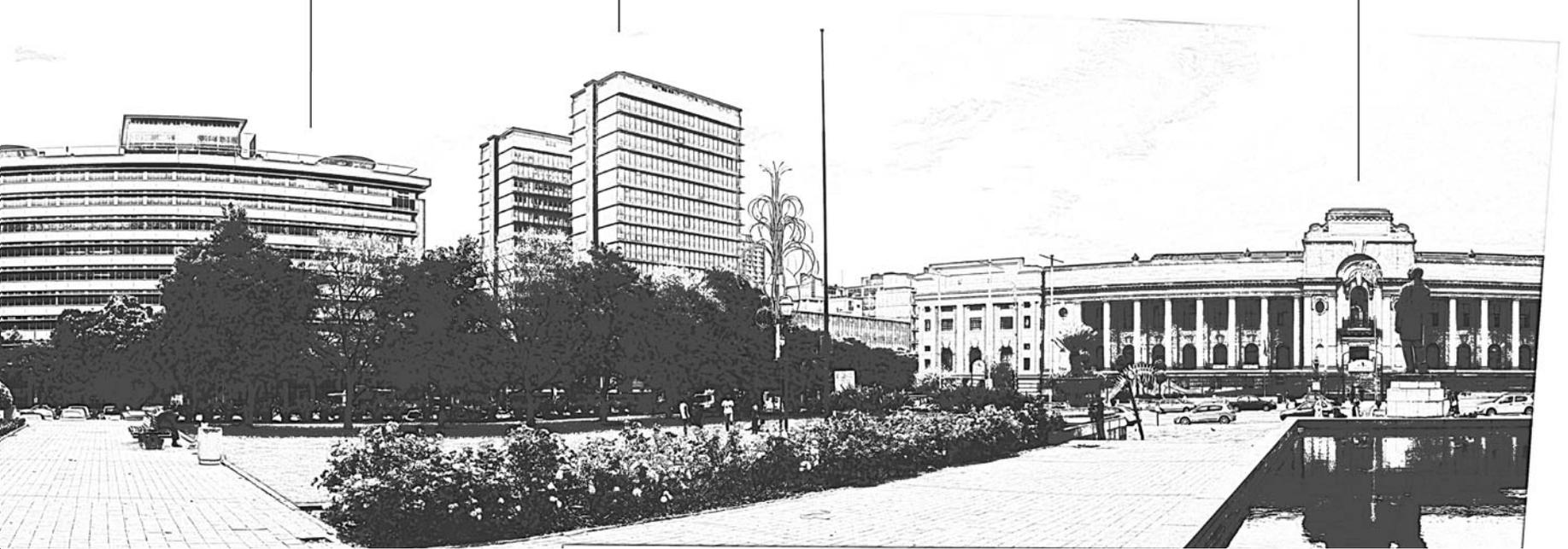


Fig. 34: Northern view across site looking in east/west direction (Author, 2011).

The Land Bank
Currently Being Refurbished

The Bank of Lisbon +
The South African National Defence Force

National Museum of
Natural History



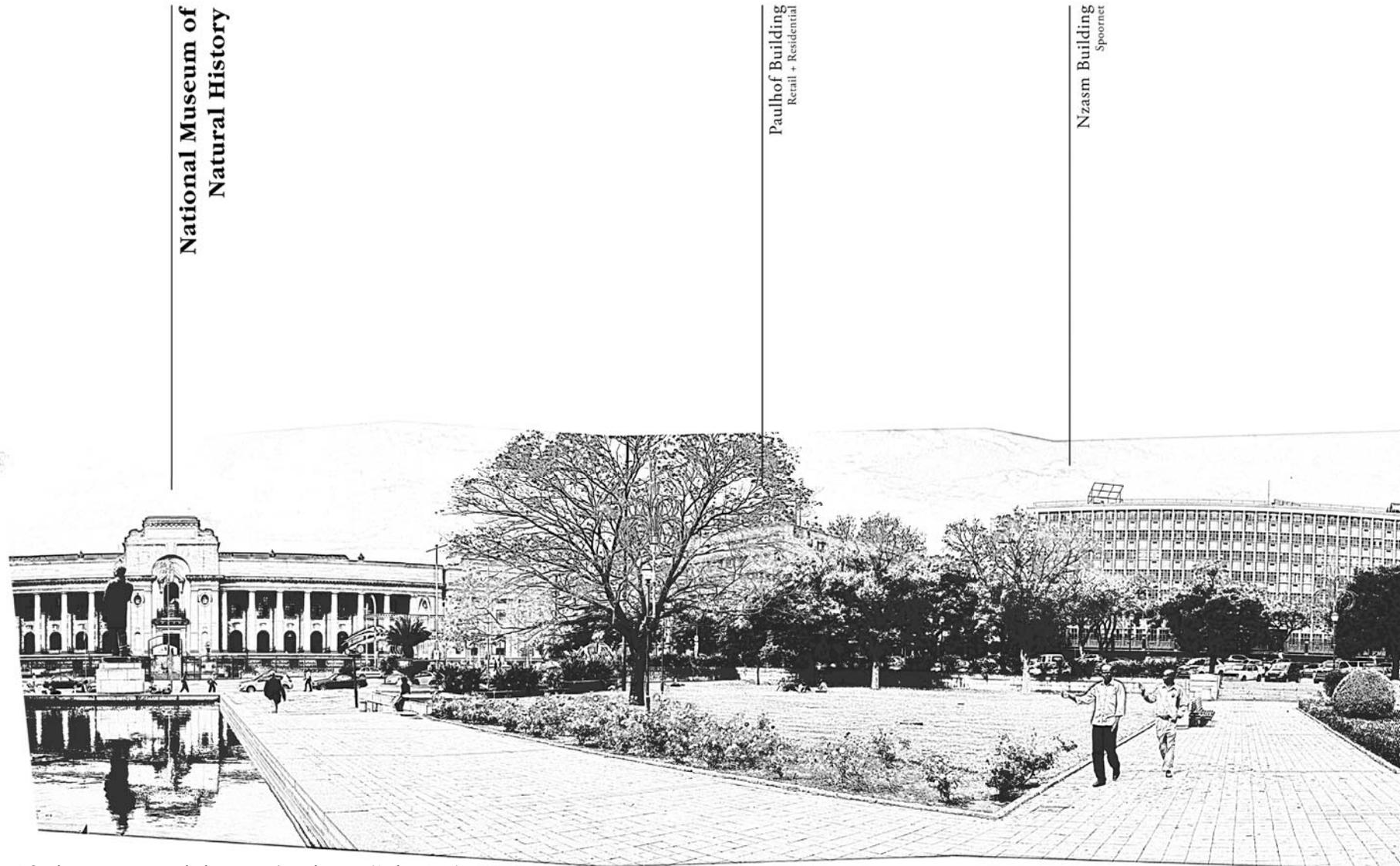


Fig. 35: Southern view across site looking in east/west direction (Author, 2011).

The Department of
Home Affairs

City Hall





Fig. 36: View of poor edge condition along Visagie Street (Author, 2011).



Fig. 37: Edge condition along Minnaar Street is better defined, but there is no access to square (Author, 2011).



Fig. 38: View of Pretorius Square and Paul Kruger Street edge condition (Author, 2011).



Fig. 39: Underutilised space on Pretorius Square (Author, 2011).

Theoretical Discourse



3

THEORETICAL DISCOURSE

3.1 WRITING ARCHITECTURE

According to Thomas A. Markus and Deborah Cameron, language and writing is a neglected subject within the discussions relating to architecture and space. The richest symbolic systems that human beings have access to is that of natural languages. The way these languages are utilised, both in speaking and in writing, about the urban and built environment, plays a great role in shaping our perceptions about ourselves, our surroundings and our responses to it (Cameron & Markus, 2002).

Fundamentally architecture is a social art concerned primarily with creating liveable, sociable and memorable places. Any practice that has such a strong social orientation must have a verbal and written component to it, given that language provides humans with their primary means of social interaction.

It can be argued that the written word does not have the same impact on an individual as the spoken word does. Writing does however involve just as much interaction as speech does, even if it is under different spatio-temporal conditions, since written language is given meaning when an individual engages with the text.

It should however be noted that the author is not advocating architecture as language, but rather argues for the important role that language plays in the production of architecture. If architecture is treated as language, it has the regrettable effect of obscuring the effect that actual language, writing and speech, has on shaping our understanding of the built landscape.

Buildings should thus not necessarily be seen as linguistic objects, but the meanings we attach to space and architecture, the perceptions and the judgements, are heavily dependent and highly influenced by the texts, both written and spoken about them.

The 'social production of reality' is also greatly facilitated by the use of language. As product and residue of communities' previous constructs of reality and as starting point for the production of new realities, language is once again a key protagonist. A certain amount of insight is gained into the past construction and future functionings of reality if one studies language within its social context (Cameron & Markus, 2002: 12).

Text can also be employed to support the visual qualities of architecture and can thus be read as either a preamble to the image to be seen (i.e. the architectural product) or serve as a clarification of what has just been seen. If text is used as preamble, it will have a previously set up framework of expectations and viewpoints into which an individual must fit his or her own experience and judgement of both building and space (Cameron & Markus, 2002). This greatly affects the nature of the encounter as the validity of the architecture has been determined before the physical encounter.

Text and architectural product can however work collectively to enrich spatial experience – a 'multimodal text' of sorts (Cameron & Markus, 2002: 133). In this context, neither text nor product retain the properties they might have had in isolation, but rather in their juxtaposition, transforms into something new.

It is the intent of the author that this document fulfil the roles of both *preamble* to what is to be seen in terms of architectural product and as *clarification* of what has just been seen.

3.2 MUSEUM SPACE

What is museum space? Upon entering the physical building, the visitor encounters a sequence of rooms and in-betweens that constitute the immediate and tangible space of the museum. The museum does however also extend its boundaries through its physical surroundings – public spaces, streets, parks and squares. The tangible and intangible also constitute museum space with museums being seen as gathering places that require no belief, just enquiry according to Fleming (2005).

Gurian (2005: 207) suggests that in order for us as society to maintain a peaceful and productive existence, we need access to three different kinds of spaces. Firstly we need spaces for family and friends (our most intimate of spaces), secondly we need places and spaces for work (our intermediate spaces), and thirdly we need spaces where it is safe to have the 'chance-encounter' (our most public of spaces). Museum space, and its extents, fall within this last category.

Museums need to be greatly varied in their spatial composition – they should have spaces that delight and inspire, spaces that provoke deep reflection and spaces that stimulate learning and discourse.

Museum space is however not only limited to the physical building and its surroundings, it extends further, past its physical reach. The potential visitor enters the psychological space of the museum long before actually entering the building (Fleming, 2005: 54). They enter this space through reading – the reading of advertisements, of reviews and of texts. They also inhabit this space through speaking – having conversations about the specific building, its collections and its exhibitions. This societal discourse prepares the potential visitor to make contact with the physical museum.

3.2.1 THE PERCEPTION AND THE CHANGE

For most individuals there seems to be a separation between the belief in the value of museums and their actual use of them (Gurian, 2005). For museums to become applicable and inclusionary within society they must provide services that are regarded as essential by the user, that are personally orientated, timely and available on demand. Gurian (2005: 205) defines 'essential' as the transformation of an internal inquiry into an action – a personal impulse of sorts. The process of changing the museum from 'nice to have' to 'indispensable' is however not an easy one.

The user experience is imperative in the design of any new museum space and is the first step to ensuring that users take ownership of the space and the building. The space within the museum is first and foremost that of the audience. It is a space that resonates with their lives, their being and their humanity (Greenberg, 2005: 226). Architects need to design spaces that are welcoming, with easily locatable human amenities and that employ a way-finding strategy that is easy to navigate and understand.

Museums are also regarded as agents of urban change and urban comprehension. They carry with them great significance in terms of symbolism, urban regeneration and cultural tourism. Fleming (2005: 59) argues that in order for museums to become successful in being agents of urban change and regeneration they have to be 'of their place' and 'of their setting'. He says that museums need to be of the 'somewhere' and not of the 'anywhere' – each has a very specific and relevant context.

A mixing of uses and facilities can be employed in order to tie the museum programmatically to its context. This cross-programming is also very

important when considering the socio-spatial organisation of museum space. Jane Jacobs (in Gurian, 2005: 207) speaks about mixed-use spaces. She says that these spaces range in scales and complexity – from shopping malls, single city streets, singular buildings and even urban precincts. These mixed-use locations attract the widest variety of users because of their multitude of offerings and services.

For buildings, streets or precincts to function as mixed-use, they need to have a combination of everyday services as well as the occasional exotic speciality. They need to have good critical mass in terms of residential population, good access to public amenities, almost around the clock activity and a significant reliance on pedestrian orientated foot-traffic.

Museum space needs to become more mixed-use in approach. Some of the most successful museums in America and in Europe have already started to adopt this strategy with museums offering not only exhibitions but also various educational programmes, shopping opportunities, restaurants, performance and public space as well as other everyday amenities. Considering everyday amenities within the study area, the opportunity arises to incorporate infrastructural elements into the design of the museum. With the site location being central to that of the precinct as well as the southern part of the CBD, and with parking being extremely limited within the area (see Fig. 23, Chapter 2), the possibility to incorporate a parking facility will be investigated.

Gurian (2005: 212) argues for the design and conceptualisation of the museum to be approached similar to that of a mall. She says that museum space needs to offer the possibility of entering anonymously, being able to sit and stroll without having to commit to any organised activity. Museums also need to

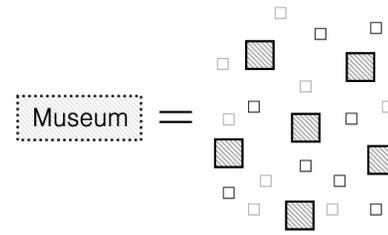


Fig. 40: Variety of spaces that work together to shape the overall museum experience (Author, 2011).

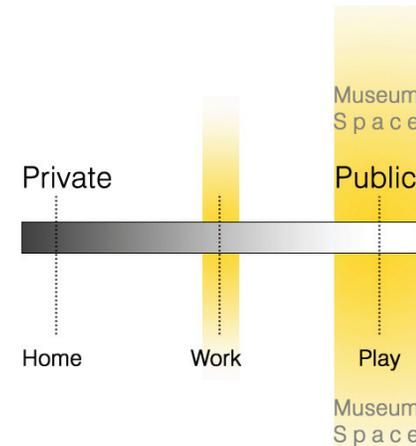


Fig. 41: Museum space associations. Museum space needs to be a true public space (Author, 2011).

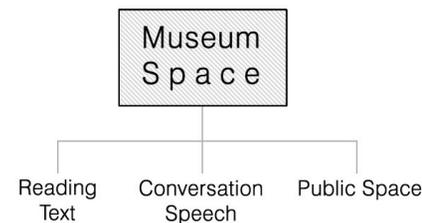


Fig. 42: The extent of museum space beyond the confines of the physical building (Author, 2011).

realise the value of ‘impulse visiting’ – being able to delight in and appreciate a small segment of the museum in a short period of time.

Museum architecture should be recognised as a social and cultural product, a product that is constantly reproduced through use.

It is the opinion of the author that there is a need for a ‘museum re-think’, for the museum space to gain validity within society and for the museum to once again become essential.

Suzanne MacLeod (2005: 13) consequently defines architecture in support of the argument as “that which is conceived as the outcome of a perceived social need, located in the specifics of time, space and site. As society changes and new social needs arise, new building forms will be produced in order to fulfil that social need”.

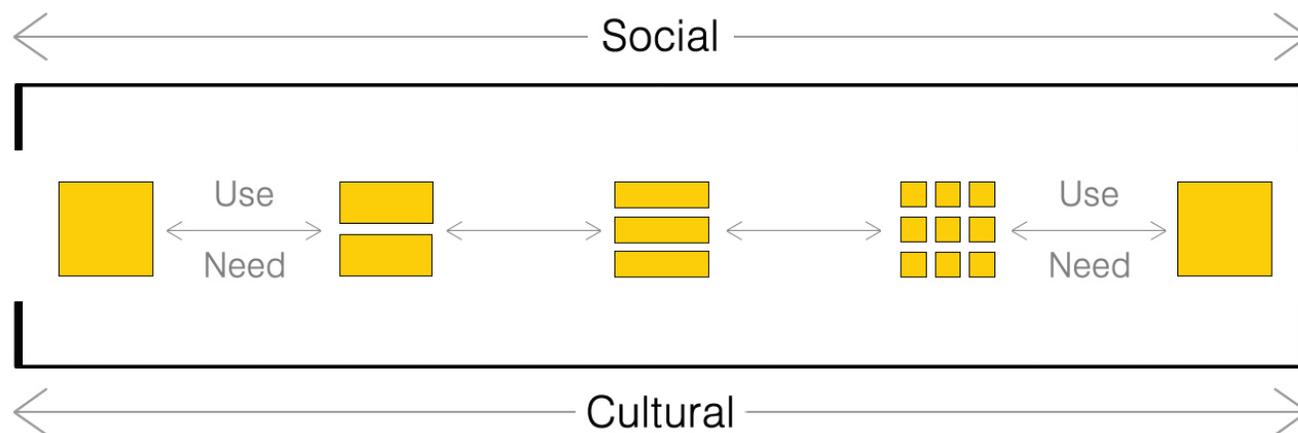


Fig. 43: The continuous reconstruction of museum space according to social and cultural factors (Author, 2011).

3.3 THE EVERYDAY + THE ORDINARY

Henri Lefebvre addressed many themes intrinsically relevant to architecture and urbanism. One of these themes is that of 'the everyday'.

Lefebvre (McLeod 1997: 9) regarded the everyday as the 'authentic life', the 'real', the 'here and now'. It was, in his opinion, material life with a 'lyrical tone', life with a 'dramatic attitude'.

The everyday life is also a life of contradictions – it is a life filled with monotony and routine but also with event and festival, it has stability and elements of uncertainty, the rhythmic march of linear time is juxtaposed with the cyclical renewal of nature and it is a life that is steered by rationalism and capitalism, but it manages to stand and function external to these (McLeod, 1997: 13).

Lefebvre called for a reactivated street-life, of an urban centrality and residential participation – all of which creating opportunities for spontaneity. He believed that the everyday life also harbours the strongest possibility to realise transformation. When people can no longer lead their everyday lives, it fosters the need for a revolution (McLeod, 1997: 15-17). Everyday life embodies the desires that generate adjustment and is seen as the motivating force for social change.

The proposed project envisions tapping into this 'social revolution', ensuring an amelioration of the everyday structures surrounding museum and public space. Museum space needs to become part of people's everyday lives; it needs to become embedded in the societal realm so that it starts to become indistinguishable from everyday proceedings – it needs to become a space of, and for the people.

3.4 THE IN-BETWEEN

In Architecture the boundary takes many forms – it is signified by the facade, the wall, the window, the entrance, the door, the threshold, the perimeter of a site and a building’s footprint or volume. On a larger scale the boundary takes the form of roads, signs, gates, hedges, canals, built structures or simply a mountain, forest or plain (Blaisse, 2009: 85).

3.4.1 UNDERSTANDING THE IN-BETWEEN

In exploring the philosophy and arguments behind the concept of the liquid boundary; many proponents came to the fore. Aldo Van Eyck (1918-1999) was one of the main protagonists in the formulation of an understanding and a theory of the in-between.

Van Eyck borrowed his philosophical terms of the ‘in-between’ from Martin Buber who states that “the fundamental condition of being human is man with his fellow man. It is rooted in the fact that a being considers another as ‘an other’, so as to be able to communicate with him in a sphere which is common to both and which transcends the individual spheres of both... I call this the sphere of the in-between. It is a primary category of human reality. It will be the starting point for the real third” (in Farhady & Nam, 2009: 17).



Fig. 44: The in-between space we experience on a daily basis between one another (Author, 2011).

Herman Hertzberger (in Farhady & Nam, 2009: 17) argues in terms of the transition(s) of space, making use of the term “threshold”. He states that “the threshold provides the key to the transition and connection between areas with divergent territorial claims and, as a place in its own right, it constitutes, essentially, the special condition for the meeting and dialogue between areas of different orders.”

The philosophies of Van Eyck aimed at challenging and reconsidering the relationship between design and threshold by looking at four interrelated aspects (Farhady & Nam 2009: 18-25):

SPACE

Space signifies the most significant dimension of the in-between in architectural design and there are many ways in which this concept can be expressed (see Fig. 48 - 52).

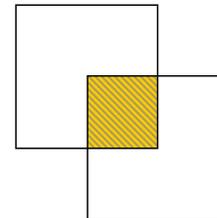


Fig. 45: Threshold through overlapping of two elements (Author, 2011).

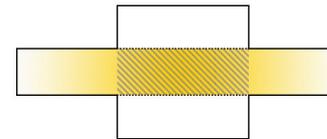


Fig. 46: Threshold through the continuation of one element into another (Author, 2011).



Fig. 47: Threshold through articulation of different elements (Author, 2011).



Fig. 48: Threshold through the fragmentation of elements (Author, 2011).

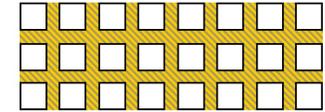


Fig. 49: Threshold through the repetition of separate elements (Author, 2011).

TIME

Time is the invisible, but sometimes tangible dimension of the in-between. It makes itself known through the mobility and temporality of elements and spaces, allowing for the building to become flexible for functional and spatial changes over time.

ENVIRONMENT

Bringing delicacy to design in order to create a sense of ambiguity by making use of transparency and materials such as light, shadow, greenery and wind is what signifies the environmental in-between.

HUMAN

The intimate threshold is constituted by the relationship between the individual and the physicality of a building, its materiality and its spaces. The overlapping of human-activities and uses can also contribute to the human experience of the in-between.

The author will aim to implement and comprehend the concept of the threshold and fully utilise its resources in the design process, by closely considering the four above mentioned concepts propagated by Van Eyck.

3.4.2 UNDERSTANDING THE URBAN IN-BETWEEN

When there is an urban transition, there is a formation of a threshold with the ability to span various urban scales. When residential, civic and commercial uses coincide and collide, several transitions and resultant thresholds are formed, both naturally and artificially (Ramaswamy 2005: 14). In exploiting the idea of a deliberate and intentional heterogeneity in architecture, where contrasting objects are placed together, designers will be able to create complex and compelling spaces and buildings with complex and compelling in-between places. An architecture of cross-programming and of hybrid space can come into being. If there is an establishment of a successful mixing of uses, the making of lively thresholds can be facilitated. (Ramaswamy 2005: 4).

Within urban landscapes there are conditions and instances where buildings create planned or unplanned in-between slow spaces which eventually become part of the everyday civic landscape.

Our built landscapes can therefore have distorted and ambiguous contours with vague and random morphologies allowing for inside and outside forms to merge. These threshold spaces between the built fabric will evolve over time, often into an integral part of the city's urban tissue. (Ramaswamy 2005: 15)

3.4.3 UNDERSTANDING THE INTIMATE IN-BETWEEN

The physical experience of a space needs to be highlighted in order to fully employ the intimate in-between. This experience needs to be visceral and imaginative, tactile and sensuous (Bennett 2006: 7).

Allison Bennett (Bennett 2006:7) illustrates the interdependence of our experience of space and our bodies. She

says “the physical sensation encompasses the skin like a breath and transforms at the collision of surfaces - the collapse of the space between - the touch of a hand on a doorway, the strike of a shin on a step. Touch is the perpetrator of the trace, the patina of occupation. To live is to leave traces.”

The space between a building's physical tectonic and that of the “lives and experiences enacted within it” (Bennett 2006: 1) constitutes another aspect of the intimate in-between.

Van Eyck (in Farhady & Nam 2009: 19) believed that an architecture aiming to be humane in its approach, must dedicate special attention to the in-between; specifically to the architectural places and spaces of transition through which people meet. People need to be invited to stay, to linger. He believed that this is possible by re-introducing soft boundaries into the architectural realm.

The author will aim to reinstate the tactile experience of space, allowing for the disintegration of the perceived boundary between the body and the built – the reintroduction of the ‘lived experience’ rather than the ‘perceived happening’. The proposed design will also investigate the construction of possible urban as well as architectonic spatial in-betweens in order to form a hierarchy of liquid transitions.

3.5 DESIGN GUIDELINES

3.5.1 WRITING ARCHITECTURE

- Have text and architectural product work collectively in order to enhance the spatial experience of the user.
- Illustrate that text and typography can have a spatial presence within architecture and the urban environment.

3.5.2 MUSEUM SPACE

- Design the museum in order for its spatial composition to extend beyond the confines of the physical building.
- Design an architectural product that is strongly rooted in context.
- Employ a mixed-use design strategy that will ensure an architectural end-product of multi-functionality.
- Design a truly public building. A building that is appropriated by people and is given meaning through use.

3.5.3 THE EVERYDAY + THE ORDINARY

Deborah Berke (1997: 223) believes that an architecture of the everyday and the ordinary is not easily quantifiable and resists true characterization, but she does mention some points that can be related to an architecture of this nature:

- AN ARCHITECTURE OF THE EVERYDAY MAY BE PEDESTRIAN AND FAMILIAR
It is an architecture that doesn't tell you what to think, but allows you your own interpretations and connotations.

- AN ARCHITECTURE OF THE EVERYDAY RESPONDS TO PROGRAMME AND IS FUNCTIONAL

- AN ARCHITECTURE OF THE EVERYDAY MAY BE ORDINARY

- AN ARCHITECTURE OF THE EVERYDAY MAY BE SENSUAL

The everyday world provokes ones senses, it is filled with touch, smell, sight and sound. The architecture of the everyday encapsulates spaces that allow for the essential experience of space and architecture through the body.

3.5.4 THE IN-BETWEEN

- Articulate the transitions from one space to another. Explore the possibilities of the following:
 - The overlapping of spaces.
 - The creation of an intentional threshold through the articulation of different elements.
 - The repetition of separate units.
- Explore the invisible notion of the in-between through the notion of time:
 - Designing flexible spaces that allow for functional changes over time.
- Experiment with light and shadow both as materials and as spatial catalysts in order to explore the environmental in-between.
- Making use of tactile materials and textures in an attempt to explore the sensuous possibilities of space through touch and sight.
- Introduce a hierarchy of thresholds – exploring the building mass, the facade, the building envelope, the individual spaces and the architectural detailing in terms of the in-between.



Fig. 50: Power to the Imagination (Brodskaia, 2010). Here typography becomes at once image and spatial construct, whilst also incorporating the ideas of threshold, surface and recess.

4

The Typeface

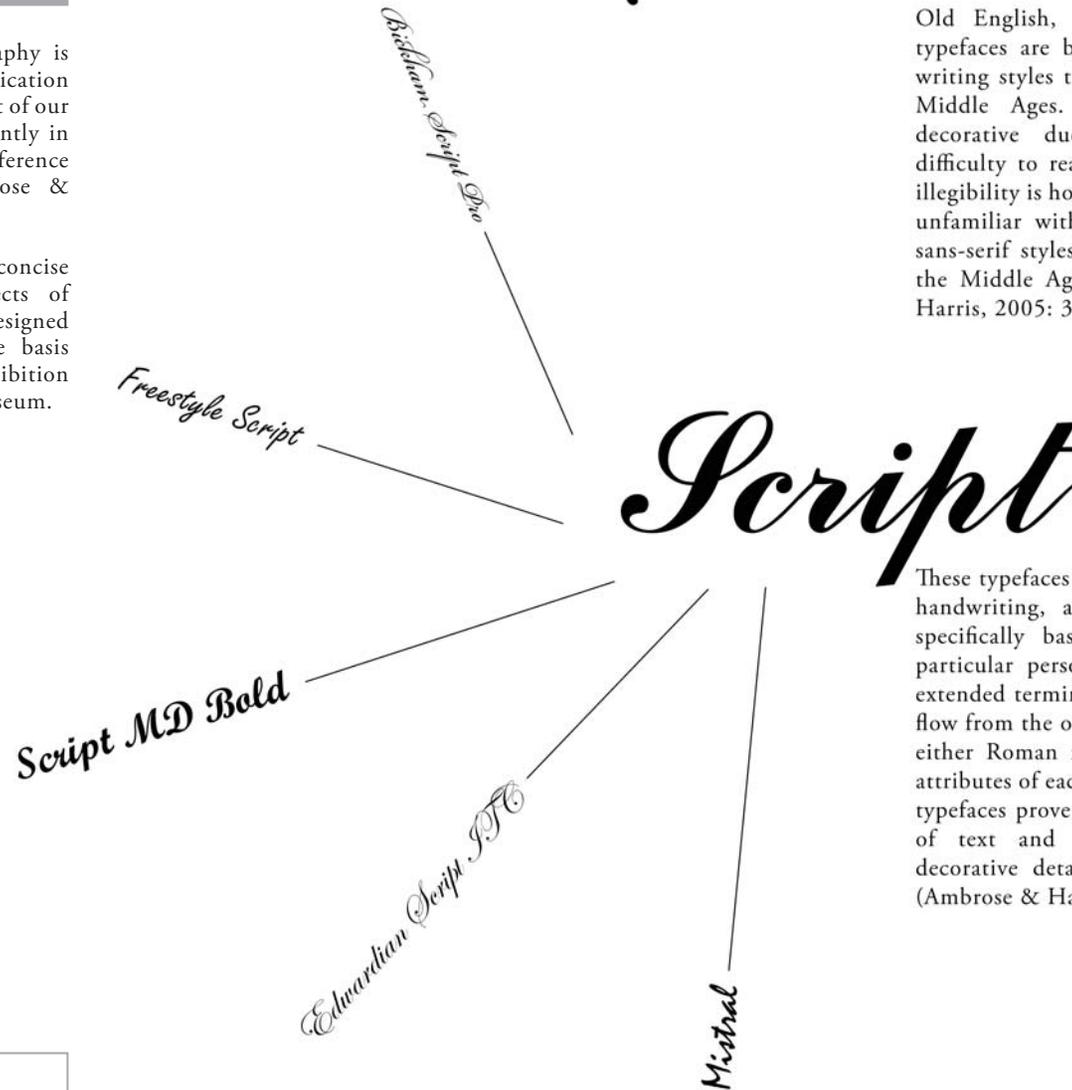
4 THE TYPEFACE

Evolving over centuries, typography is an essential design and communication element and forms an integral part of our day-to-day existence. It is constantly in flux and continues to evolve as preference and technology change (Ambrose & Harris, 2006: 170).

This chapter serves to give a concise overview of the broader aspects of typography, and all though not designed by the author, could form the basis for curatorial content and exhibition material within the proposed museum.

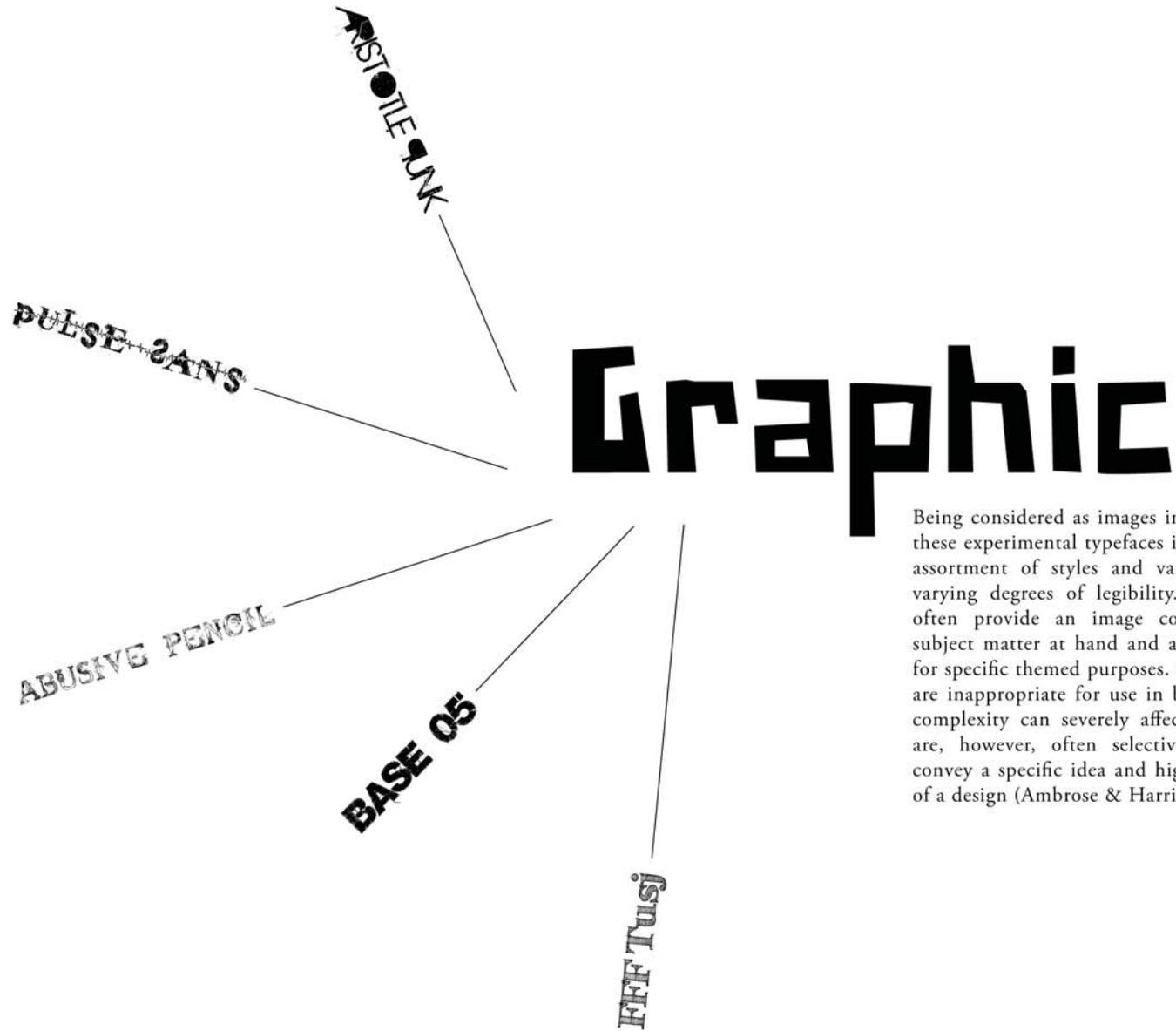
Blackletter

Old English, Block, Broken or Blackletter typefaces are based on the ornate and heavy writing styles that were ubiquitous during the Middle Ages. These typefaces are mainly decorative due to their complexity and difficulty to read in large blocks of text. This illegibility is however due to the fact that we are unfamiliar with the typeface - contemporary sans-serif styles would be equally difficult for the Middle Age man to decode (Ambrose & Harris, 2005: 38).



These typefaces were created in order to imitate handwriting, and in some cases, they were specifically based on the handwriting of a particular person. These typefaces often have extended termination strokes so that the letters flow from the one to the other. Not classified as either Roman nor Gothic, as they may share attributes of each. Similarly to Blackletter, these typefaces prove difficult to read in large blocks of text and often provide supplementary decorative details to titles and brand names (Ambrose & Harris, 2005: 56).

4.1 TYPE FAMILIES



Being considered as images in their own right, these experimental typefaces include the widest assortment of styles and variations, all with varying degrees of legibility. Characters may often provide an image connection to the subject matter at hand and are often designed for specific themed purposes. Graphic typefaces are inappropriate for use in body text as their complexity can severely affect legibility. They are, however, often selectively employed to convey a specific idea and highlight the drama of a design (Ambrose & Harris, 2006: 103).

Fig. 52: Font families: Graphic (Author, 2011).



Roman typefaces have their origins in text that was carved into Roman stonework, and encompass the oldest typeface category. These typefaces are typically used for body text because their decorative serifs help the eye to progress smoothly from letter to letter. As with many typefaces there are different subclassifications and variations - these include Old Style, Transitional, Modern (or Classicist), Slab Serif (or Egyptian), Clarendon and Typewriter. Over the years, Roman type has morphed to reflect changes in paradigm and style, which has resulted in its evolution (Lupton, 2004: 17-25).

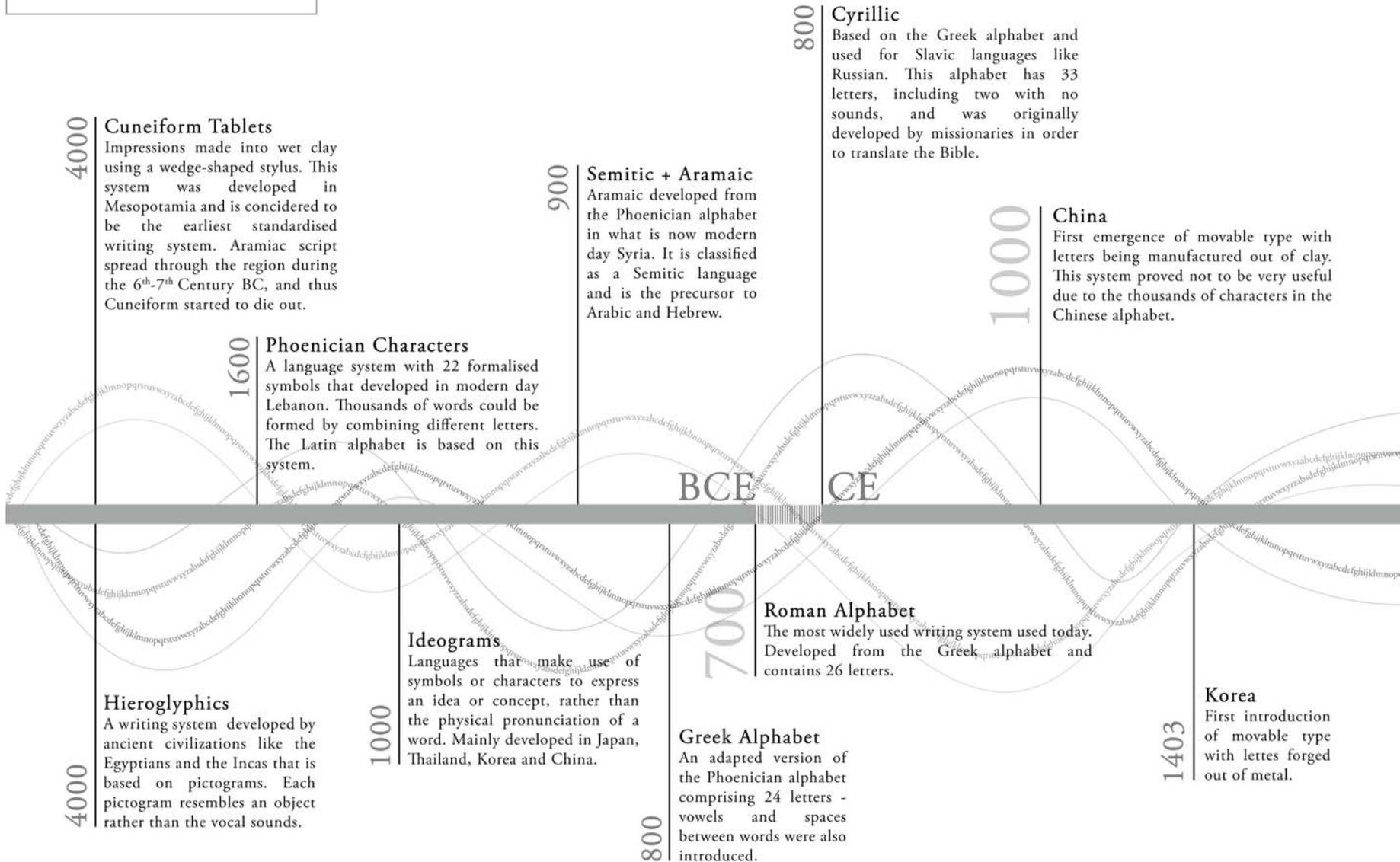
Fig. 53: Font families: Roman (Author, 2011).



Although younger than their Roman brothers, sans-serif typefaces have been in existence for over a 100 years. Gothic fonts provide a clean-cut letterform, but they can hinder legibility of large blocks of text due to the lack of serifs. Gothic typefaces do not have a double-storey 'g' as used in some serif typefaces, but rather, always has a 'g' with a tail. As with Roman fonts, Gothic letterforms also fall within various categories (Ambrose & Harris, 2006: 103).

Fig. 54: Font families: Gothic (Author, 2011).

4.2 A BRIEF HISTORY OF TYPOGRAPHY



1436

Printing Press

The first introduction of movable metal type in the West. A German printer, Thomas Gutenberg, developed the first printing press which allowed for the mass production of books and re-usable text characters.

1500-1600's

Renaissance

Typography developed extensively during this period with hotspots in France, Italy and Holland. The Italian model was favoured due to the overpowering influence of the Renaissance. During this period letterforms resembled those made by pen and thus fully utilised the greater detail and flexibility that metal type offered. Blackletter consequently started to fall out of favour.

1860 - 1920's

Arts and Crafts

A movement favouring simplicity in design and rejecting heavily ornamented interiors. There was an emphasis on craftsmanship and an honesty through design. These tendencies were also reflected in the design of new typefaces.

Century Schoolbook
Morris Fuller Benton
1901

Franklin Gothic
Morris Fuller Benton
1904

COPPERPLATE GOTHIC
Frederic Goudy
1905

1910 - 1940's

Modernism

The emergence of form follows function. Endeavour to define the new paradigm and what is to be considered 'modern' as there was a complete disregard of history and the past. Rapid progress in terms of design and functionality were key concerns. Typefaces of this era often forced viewers to see the everyday differently by presenting unfamiliar typographic forms. Sub-movements include DeStijl in Holland (1917) and Constructivism in Russia (1918).

1931

Nazi Germany

Blackletter was declared the official typeface of Germany. In 1941 Blackletter was outlawed in favour of Roman type.

1500's

Claude Garamond

The first independent type foundry was established by Parisian printer Claude Garamond.

1800's

Industrial Revolution

New techniques developed that allowed for increased levels of detail in typefaces. The 'point' measurement system was introduced as well as the use of **boldface**. Experimentation with serifs also started to see the light of day.

1919 - 1933

Futura
Paul Renner
1928

The Bauhaus

Highly influenced by geometric forms and proportions, typefaces that originated from this school pushed the boundaries of sans-serif letter design.

1150 - 1500

Blackletter

A typeface developed in France that was based on the letterforms of the Middle Ages. Nowadays this typeface has fallen out of favour due to its ornate letterforms and unfamiliarity.

1796

Lithography

Aldis Senefelder invents Lithography and revolutionises the print-making process.

1885

Monotype

The Monotype character caster was patented by Tolbert Lanston. This method made it possible to cast single letters instead of whole lines as with Linotype.

1950's

Humanist Type

Following the Second World War there was a consumer boom in the USA which led to a renewed optimism. Many creatives and intellectuals also fled Nazi Germany resulting in an expanding cultural paradigm. Hermann Zapf started blurring the lines between sans-serif and serif typefaces and started the Humanist typographic movement.

Palatino

Herman Fapf
1950

Mistral

Roger Excoffon
1953

1960's

Pop Art

As a reaction to abstract art, Pop Art started to emerge as a reflection of consumer-culture. Typefaces were designed according to possible associations instead of theory or principle. Towards the end of the decade lettering was heavily influenced by the Art Nouveau movement.

OCR A

Adrian Frutiger
1968

1980's

Personal Computers

The widespread introduction of the personal computer coupled with desktop publishing, defined this decade in terms of typographic design. Computers replaced the physical process of type design.

Arial

Robin Nicholas + Patricia Saunders
1982

1981

Bitstream

Mike Parker and Matthew Carter establishes the first digital type foundry.

1990's

Break Away

As a reaction to the Swiss Style, typography starts to break away from the grid pattern in favour of a playful experimentation. Type becomes part of the message rather than just the conveyor.

Verdana

Matthew Carter
1996

1950's

International Style

Also known as the Swiss style, this movement advocated a new set of revolutionary principles. The movement encouraged the use of grids and mathematical standards to design letters as well as asymmetrical layouts with an emphasis on sans-serif typefaces.

Helvetica

Max Miedinger
1957

1970's

Avant Garde

Herb Lubalin and Tom Carnase
1970

Punk

This decade saw type develop to become even more decorative and extravagant. The emergence of the Punk culture towards the end of the decade rejected the decadent and extravagant nature of fashion, visual arts and music in favour of the disposable and the shocking.

1985

Fontographer

Developed by James R. Von Ehr, this software allowed for the manipulation of existing fonts as well as the creation of new ones

1984

Apple Mac

Apple makes the personal computer accessible to the masses and thus typeface design migrated away from professional typesetters towards designers of all genres. Low-res computer displays resulted in 'pixelated' font styles.

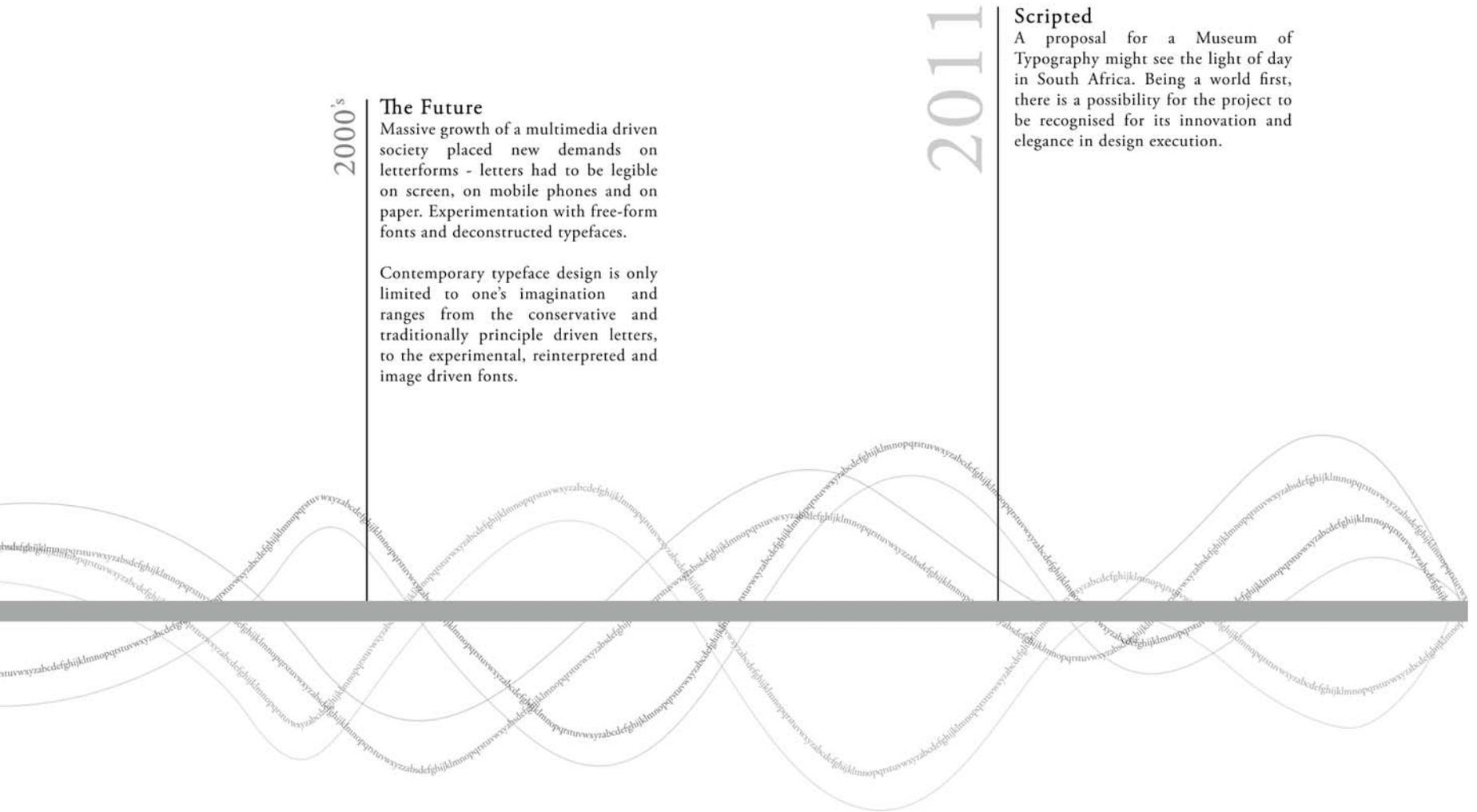


Fig. 55: A brief history of typography (Author, 2011. Sourced: Ambrose & Harris, 2006: 12-53; Lupton, 2004: 13-30; Pflughaupt, 2007: 12-27).

Precedent Studies

5 PRECEDENT STUDIES

5.1 ARCHITECTURE + TYPOGRAPHY

5.1.4 DEDUCTIONS

- Incorporation of typography is successful when conveying the identity and inherent character of the building.
- It is possible to incorporate typography either as an intrinsic part of the structure of the building or to be employed on merely an aesthetic level.
- Typography allows for the engagement between user, text, space and architecture.

5.1.1 NIKE FOOTBALL TRAINING CENTRE



Fig. 56: View of front elevation (Abrams, 2010).

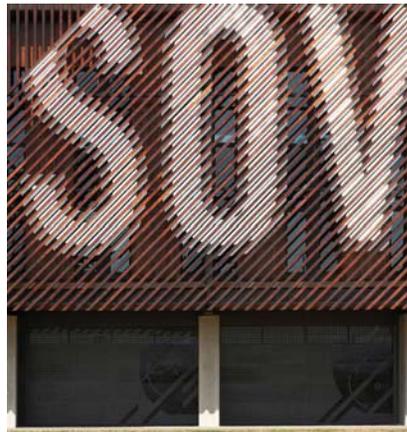


Fig. 57: Facade louvre/text detail (Abrams, 2010).

The building is wrapped in a local timber louvred structure that encloses the sandstone clad massing. The louvres shape the identity of the building (see Fig. 55) and also very strongly incorporates the use of typography within its detailing. The sandstone of the eastern facade is left exposed, upon which the names of distinguished football players are engraved (Rosenberg, 2010).

The typography forms a permanent and identifiable component of the architecture.

LOCATION: Soweto, South Africa
 ARCHITECTS: RUF Projects

5.1.2 MODERNA MUSEET MALMÖ



Fig. 58: Public street facade (Lindman, 2010).



Fig. 59: View through facade towards exterior (Lindman, 2010).

The use of typography in this project forms part of the main facade treatment and public interface of the building (Saiegh, 2010). The text employed not only forms part of the architectural aesthetic but also identifies the building within its urban context - thus acting as a way-finding mechanism.

The fact that one engages with the exterior by looking through the facade and the typography from the interior of the structure, allows the text to shape ones views and spatial experience (See Fig. 58-59).

LOCATION: Malmö, Sweden
 ARCHITECTS: Tham & Videgård
 Arkitekter

5.1.3 ALPHABET BUILDING



Fig. 60: Street interface (MVRDV, 2010).



Fig. 61: Alphabet facade (MVRDV, 2010).

The Alphabet Building takes the incorporation of typography to the extreme. Here the typography is the architecture - forming the main facade structure and overall aesthetics of the building.

Here the facade showcases the letters of the alphabet - each representing a company that will be letting office space within the structure (Jett, 2011).

The author is of the opinion that all though the text successfully becomes the architecture, the end-product is not realised to its full potential.

LOCATION: Amsterdam, Netherlands
 ARCHITECTS: MVRDV

5.2 THRESHOLD

5.2.1 MORSKE ORGULJE

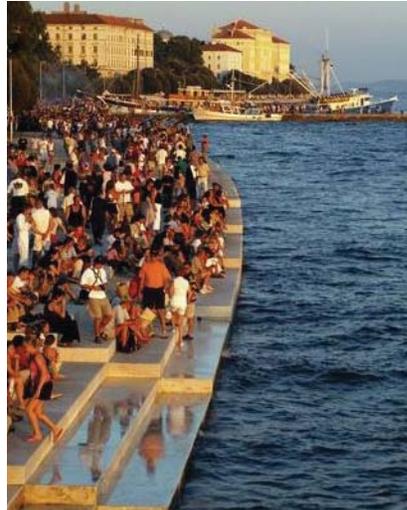


Fig. 62: The habitable threshold (Surac, 2005).



Fig. 63: Transition from land to sea (Surac, 2005).

Part of a new coastline refurbishment, these white granite steps avoid the abruptness of land meeting sea by fully occupying the in-between.

The steps, doubling as sea-organ, allow for the dissolution of the boundary between land and ocean and preserve a dilated transit space between the one and the other (Bordas, 2005: 2)

LOCATION: Zadar, Croatia
ARCHITECTS: Nikola Bašić

5.2.2 WHITWORTH ART GALLERY – EXTENSION



Fig. 64: Blurring of boundaries between landscape and architecture (Levete, 2009).

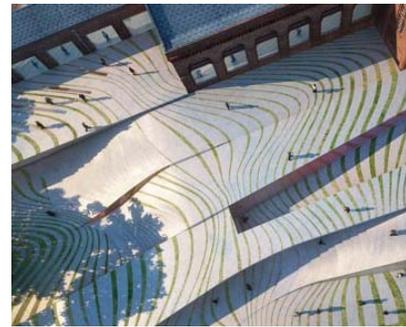


Fig. 65: Dissecting of the landscape (Levete, 2009).

This project aims to blur the boundaries between landscape and architecture, resulting in a dynamic and habitable space.

The landscape was conceived of as folds of fabric that are dissected, pushed, pulled and sliced to manipulate the user experience (Levete, 2009). By doing so, this project highlights the importance of the in-between within the spatial experience of architecture.

LOCATION: Manchester, UK
ARCHITECTS: Amanda Levete Architects

5.2.3 VICTORIA & ALBERT MUSEUM – EXTENSION

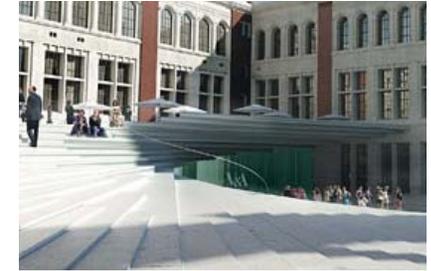


Fig. 66: The manipulation of surface (Snohetta, 2011).



Fig. 67: The confluence of spaces (Snohetta, 2011).

Through manipulation of the surface, this project disentangles the perceived boundary of the floor, the wall and the roof. It is the employment of a continuously changing surface, forming different typologies, that allows for the confluence of spaces.

Leading into the entrance is the sweep of the courtyard allowing for an uninterrupted engagement of space (Snohetta, 2011). Within this project, inside and outside meet in an unobtrusive and liberating manner allowing the formation of active thresholds.

LOCATION: London, UK
ARCHITECTS: Snøhetta

5.2.4 DEDUCTIONS

- The in-between is manifested in both tangible and intangible form.
- The threshold is a habitable architectural space and it embodies the potential to become a typology within itself.
- Through the manipulation of surface, the concept of the 'delineated boundary' is most often realised.
- By allowing architectural space to intersect with itself as well as with the landscape, the threshold is realised.

5.3 SURFACE

5.3.1 EDF ARCHIVE BUILDING



Fig. 68: Reflecting of the landscape (Lanoo, 2011).



Fig. 69: Texture as aesthetic (Lanoo, 2011).

The texture employed in this building consists of stainless steel studs that are inlaid in the precast earth coloured concrete panels of the facade.

The utilisation of texture was done to ensure a better amalgamation between building and landscape by blurring the building's edges and allowing the envelope to reflect the changing seasons and surrounding colours found in the landscape (LAN Architecture, 2011).

LOCATION: Bure-Saudron, France
 ARCHITECTS: LAN Architecture

5.3.2 TAMPA MUSEUM OF ART



Fig. 70: Building becomes texture (Barnes, 2010).

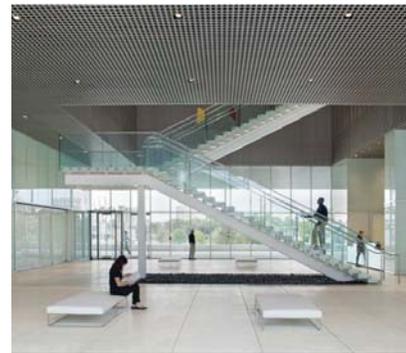


Fig. 71: The exploitation of surface. (Barnes, 2010).

In this museum of art, surface is used to establish an iconic aesthetic and identity. The building is wrapped in a continuous polished aluminium skin that is both wall and ceiling - the exploitation of surface. This skin is perforated with circular apertures which never vary in size, staying constant throughout the design.

The building is not only in the landscape, but is the landscape. Through reflection of the sky, the trees and the sea, the building at the same time blurs and unifies (Stanley Saitowitz, 2007).

LOCATION: Tampa, USA
 ARCHITECTS: Stanley Saitowitz

5.3.3 EXPLORATORY SCIENCE MUSEUM



Fig. 72: Varying openings in panels (CHN, 2011).



Fig. 73: Texture as identity (CHN, 2011).

Throughout the realisation of this building, the surface not only embodies the main aesthetic identity of the volumetric structure, but it also functions on an environmental and climatic level.

According to the architects, the texture pattern of the aluminium panels vary across the facade from more dense to more diffuse, in accordance with the amount of illuminance necessary for interior activities (CHN Arquitectos, 2011).

LOCATION: Campinas, Brazil
 ARCHITECTS: CHN Arquitectos

5.3.4 DEDUCTIONS

- The application of texture can enrich the spatial experience and presence of architecture.
- The interpretation of surface into an architectural 'material' can be purely aesthetic or both aesthetic and functional.
- Surface can create identity.
- The application of texture can either inform the entire design or be employed to selectively enrich the building.

5.4 OLD + NEW

5.4.4 DEDUCTIONS

- When additions are added to existing structures, they carry more architectural merit if they compliment instead of mimic the existing.
- Interventions can either function as sperate entities or they can be fully incorporated into the existing building.
- Unity can be achieved through stark but sensitive contrast to the context and the existing structure.

5.4.1 MCGILL UNIVERSITY SCHOOL OF MUSIC EXTENSION



Fig. 74: Friends of a feather. (S+P, 2009).



Fig. 75: Neutral interior colour palette (S+P, 2009).

This new addition to the existing School of Music is discreet in presence and occupation of its site (See Fig. 73). The building aims to establish a contemporary identity for the faculty whilst not competing with the existing faculty building .

The colour palette and material selection of the new facility is done elegantly and tactfully so as to compliment the existing facility without blatantly mimicking its materiality (Saucier + Perotte, 2009).

LOCATION: Montreal, Canada
ARCHITECTS: Saucier + Perotte

5.4.2 NELSON-ATKINS MUSEUM OF ART EXTENSION



Fig. 76: Translucent vs. solid (Halbe, 2007).



Fig. 77: Opposites attract (Halbe, 2007).

This slender, linear building provides a delicate counterpoint to the existing 1933 Beaux-Arts museum. The architecture is in fluid dynamism with the landscape and is mainly submerged below ground with five glass pavilions puncturing the ground plane (Holl, 2007).

The main conceptual approach was that the new addition exists in “complementary contrast” (Holl, 2007) to the existing Neo-Classical structure.

LOCATION: Kansas City, USA
ARCHITECTS: Steven Holl

5.4.3 MORITZBURG MUSEUM EXTENSION



Fig. 78: Old embracing new (Halbe, 2011).



Fig. 79: Symbiosis of old and new (Halbe, 2011).

With this addition the new-built intervention physically but sensitively occupies a part of the existing 15th century Gothic Military structure.

The main design idea was for the addition of a contemporary new roof from which new exhibition spaces and infrastructure are suspended (Nieto Sobejano, 2011). The roof with its angular geometry and contemporary materiality is in strong contrast with the existing irregular stonework building.

LOCATION: Halle, Germany
ARCHITECTS: Nieto Sobejano

5.5 PUBLIC SPACE

5.5.4 DEDUCTIONS

- It is possible to fuse architecture, landscape and public space into one unifying product.
- By examining and exploiting the 'surface', previously unrealised spatial possibilities can come to the fore.
- Through the manipulation of the urban surface it is possible to realise connections between city, individual and event.
- Through the reclamation of lost urban space, the establishment of a new urban place is possible.
- Public space does not always have to happen on the planar level of the street - it can be elevated in the air or possibly even recessed into the ground.

5.5.1 NORWEGIAN NATIONAL OPERA HOUSE



Fig. 80: Building emerges as landscape (Snohetta, 2008).



Fig. 81: Building appropriated as public space (Snohetta, 2008).

Independent of the activities taking place inside this cultural building, the roof has become a much frequented public meeting place (Bordas, 2008).

The building rises out of the harbour like a serene white landscape and follows a gentle slope throughout to allow the roof-scape to be appropriated by visitors. Here, the building itself has become the public space.

LOCATION: Oslo, Norway
 ARCHITECTS: Snøhetta

5.5.2 STADTLounge ST. GALLEN



Fig. 82: Uniform urban surface (Thalmann, 2006).



Fig. 83: Undulating urban surface (Thalmann, 2006).

Conceived of as an 'urban-lounge', this project breaks away from the common concept of a public space by providing a uniform surface for the pedestrian, vehicular and public interfaces (Martinez, 2006: 67). This homogeneous surface shifts and undulates in order to articulate lounge and resting areas as well as sculptural elements within the space.

The resolute continuation of this uniform red surface binds the surrounding buildings, the pedestrians and the activities to form a localised event.

LOCATION: St Gallen, Switzerland
 ARCHITECTS: Carlos Martinez

5.5.3 THE HIGH LINE



Fig. 84: Elevated urban space (Baan, 2011).



Fig. 85: Reclaimed urban place (Baan, 2011).

Running 2,5km through the New York City sky, this urban park is built on an abandoned elevated railway system winding its way through Manhattan.

The park was envisioned as an "otherworldly" landscape that offers escape from the chaotic pace of the city streets. With the incorporation of both hard and soft surfaces the park offers a "pathless landscape where the public can meander in unscripted ways" (Diller Scofidio + Renfro, 2011).

LOCATION: New York, USA
 ARCHITECTS: James Corner Field Operations, Diller Scofidio+Renfro



Fig. 86: Shredded (Davis, 2010). By shredding this sans serif letter "A" and disrupting the surface, a threshold condition is created. A harmonious tension is elicited between the clean-cut geometry of the letterform and that of the undulating surface.



Design + Development



6

DESIGN + DEVELOPMENT

Evolving from the subject matter discussed thus far in the dissertation, this chapter aims to quantify and design a suitable product for the proposed intervention. It endeavors to shed light on the thought processes that underlie specific design decisions and highlight the fundamental concepts and thoughts that went into this production process.

The design proposal should be seen as twofold - first there is the design of the planned new museum of typography and secondly the re-evaluation and redesign of Pretorius Square. Through the showcased design development and conceptualization it will become clear that these two products are interdependent and that the one in fact shapes and moulds the other.

It must be kept in mind that the aim of this dissertation is to investigate the extent of museum space and how it can inform and guide the production of meaningful public space. The intention is to revitalise Pretorius Square and provide a contemporary public space that will facilitate the urban event and the happenings of the Everyday through the exploration of the in-between.

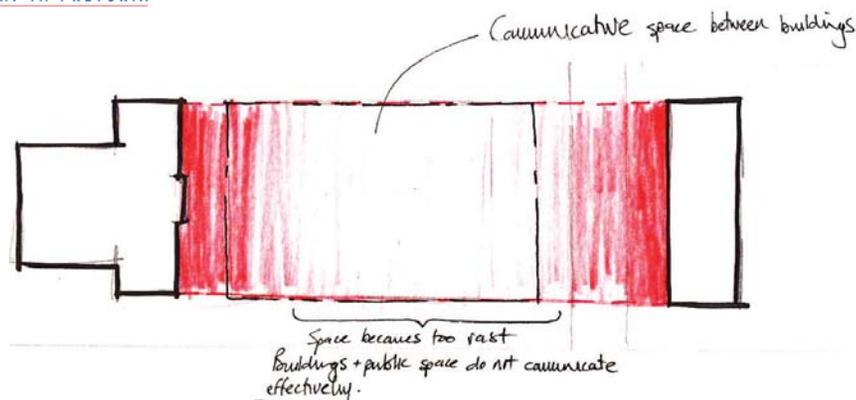


Fig. 87: Communicative space in-between buildings identified (Author, 2011).

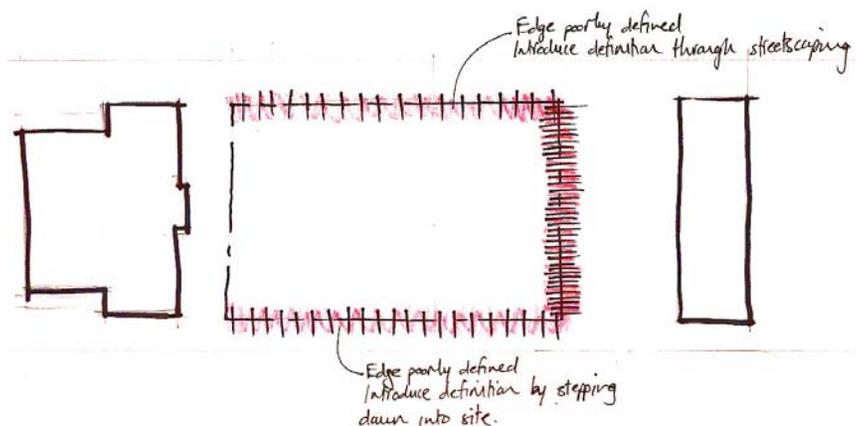


Fig. 88: Edge identification and characterisation (Author, 2011).

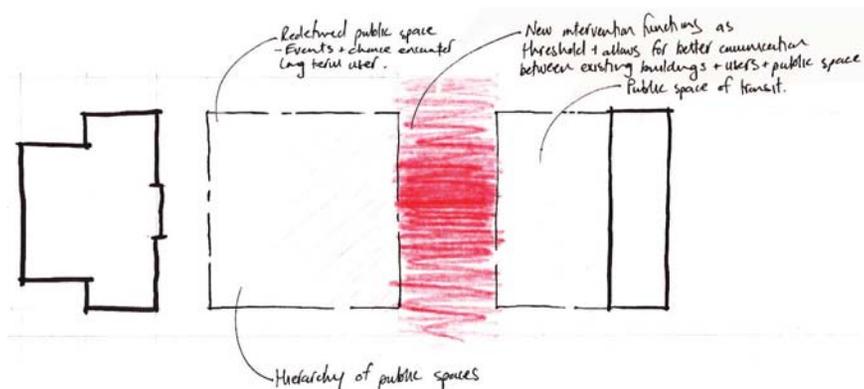


Fig. 89: Introduction of a threshold (Author, 2011).

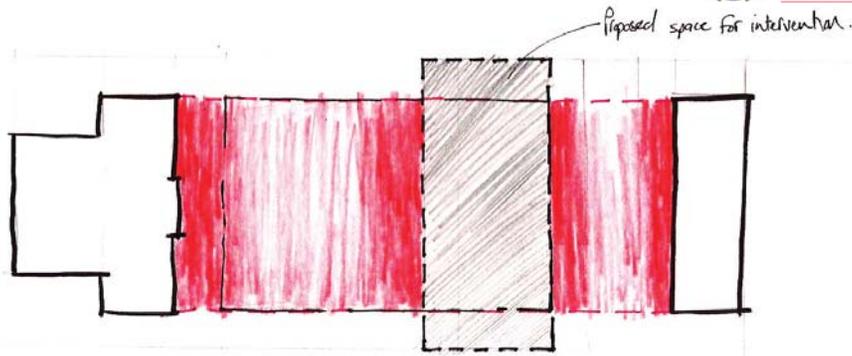


Fig. 90: Possible location of proposed built intervention (Author, 2011).

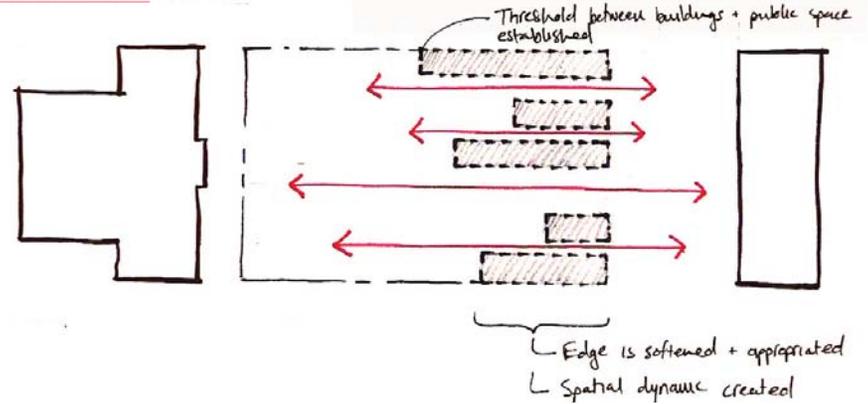


Fig. 93: Amalgamation of proposed building and landscape (Author, 2011).

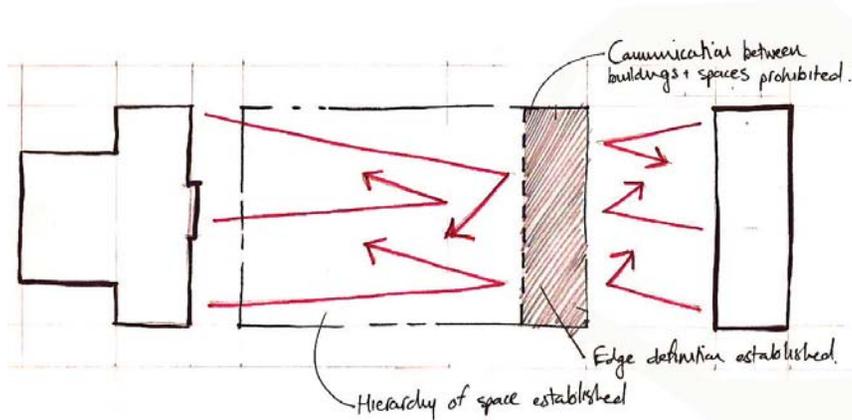


Fig. 91: Intervention forms visual obstruction (Author, 2011).

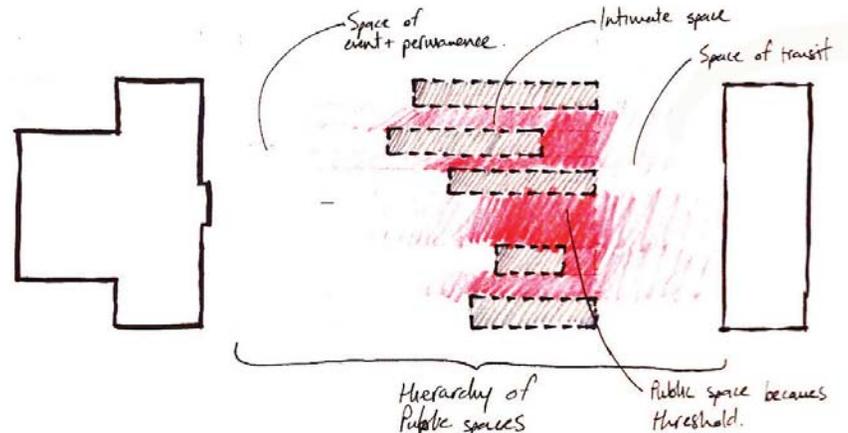


Fig. 94: Establishment of spatial hierarchy and threshold (Author, 2011).

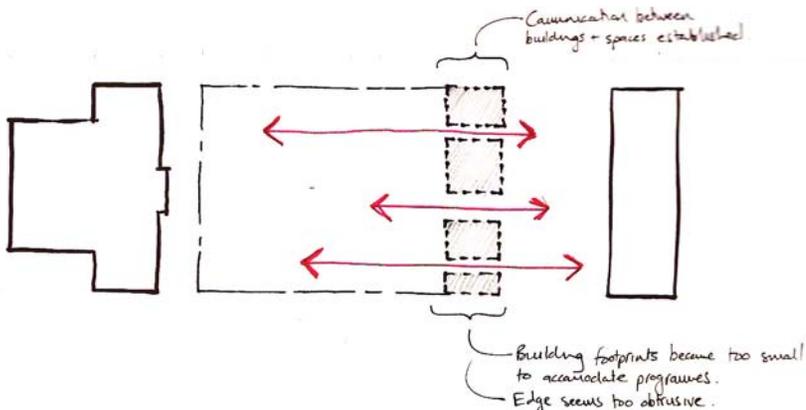


Fig. 92: Intervention forms threshold (Author, 2011).

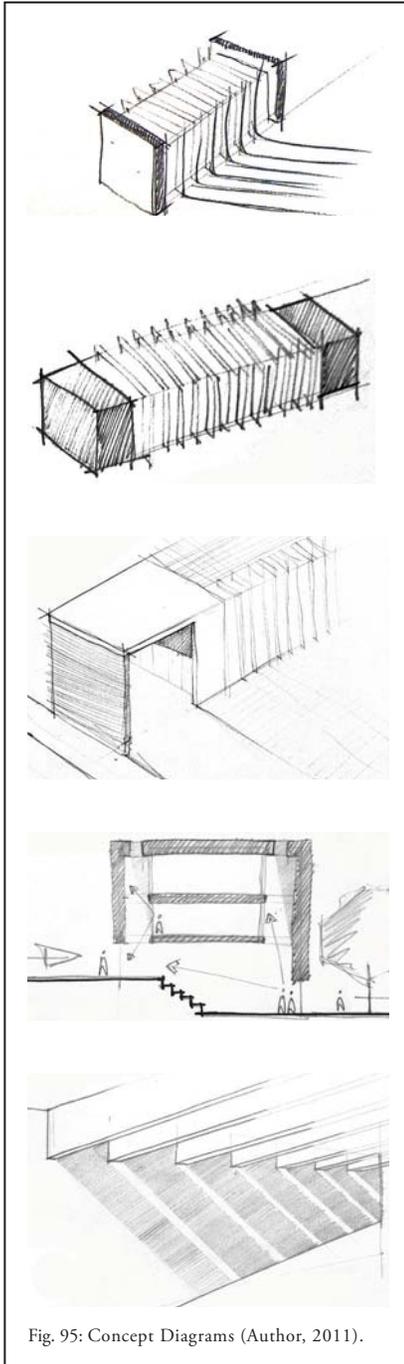


Fig. 95: Concept Diagrams (Author, 2011).

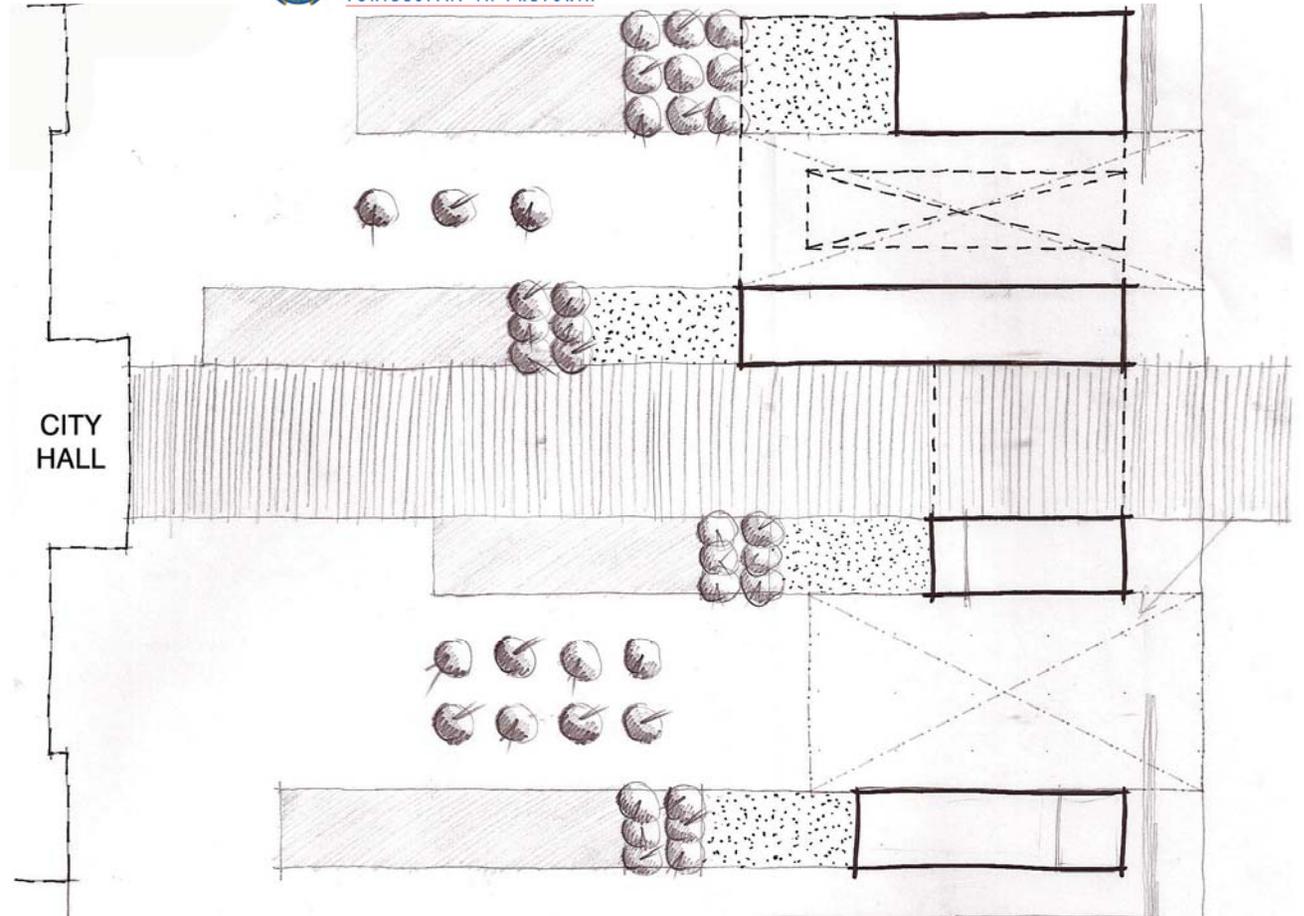


Fig. 96: Initial site conceptualization (Author, 2011).

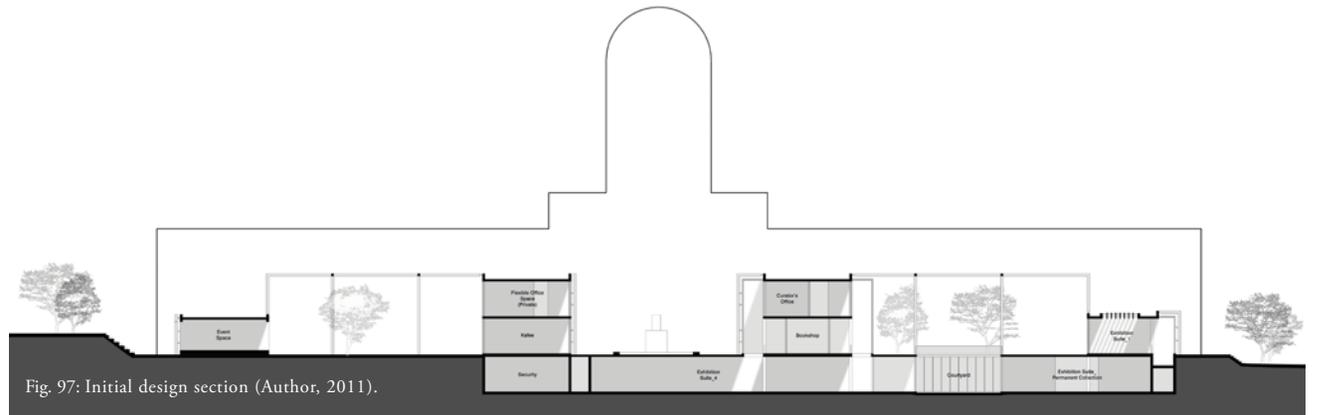


Fig. 97: Initial design section (Author, 2011).

6.1 INITIAL CONCEPTUAL RESPONSE

With the initial design response, a section of the site was identified (See Fig. 93-96) where the aim was to introduce a deliberate disturbance to the square. This disturbance, through its imposition, was then intended to make users more aware of their environment due to its interruption of the everyday.

The intervention would act as a communicative threshold between the City Hall and the Natural History Museum with the conscious distortion of sight-lines and space in order to re-evaluate the relationship of these two buildings with one another as well as with the Square itself (See Fig. 97-100).

Comprised of a subterranean component together with four pavilions that puncture the ground level of the square, the design would have had an above ground presence as well as alluding to a more complex spatial composition underneath the surface of the square.

Arranged linearly across the site and integrated with landscaped elements stretching in an East-West direction, these pavilions would also acknowledge the linear tension present on the terrain.

6.1.1 CRITICISM

Strong criticism was received on the placement of volumes on the Square itself, it was felt that the structures impose too much on the space and that they undermine the relationship between the City Hall and the Natural History Museum.

The introduction of a tangible linearity on the site was well received and it was felt that the incorporation of the buildings with the landscape is good in concept but needs to be better realised.

The idea of the pavilions being completely public, in the sense that people are allowed to freely move into and through them, was also well received. Therefore the buildings themselves become an extension of the public space.

Exploring the possibility of the subterranean was encouraged and the possibility of a fully submerged architecture needed to be examined. Also, the exploitation of the surface needed to be further explored.



6.2 CONCEPTUAL DEVELOPMENT

After considering the criticisms that were raised concerning the initial conceptual response, the author reconsidered his design approach.

A departure point was taken where the preliminary conceptual developments were taken into consideration and further developments were done, expanding on the primary design principles.

The result(s) of these further developments are illustrated in Figures 104 - 115.

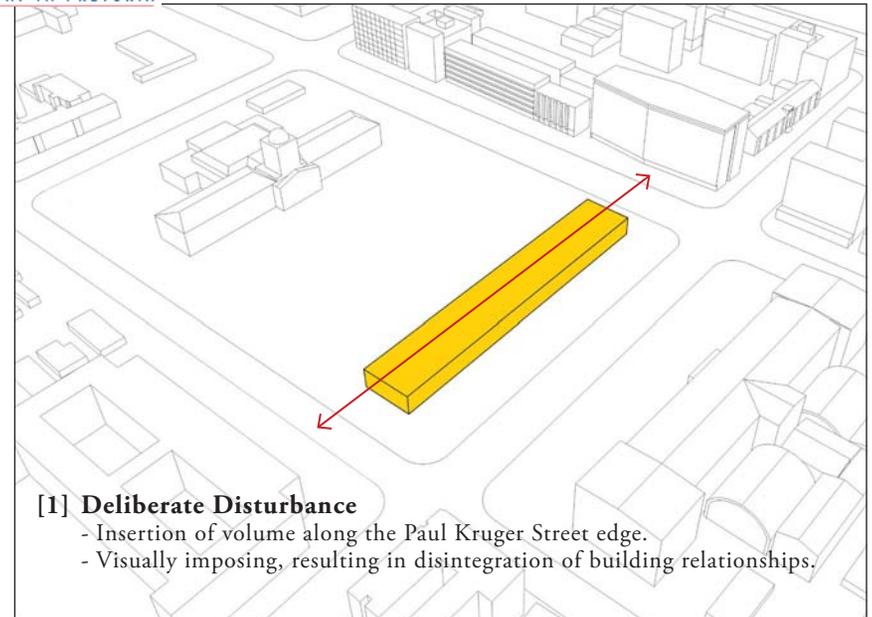


Fig. 98: Design process - Deliberate Disturbance (Author, 2011).

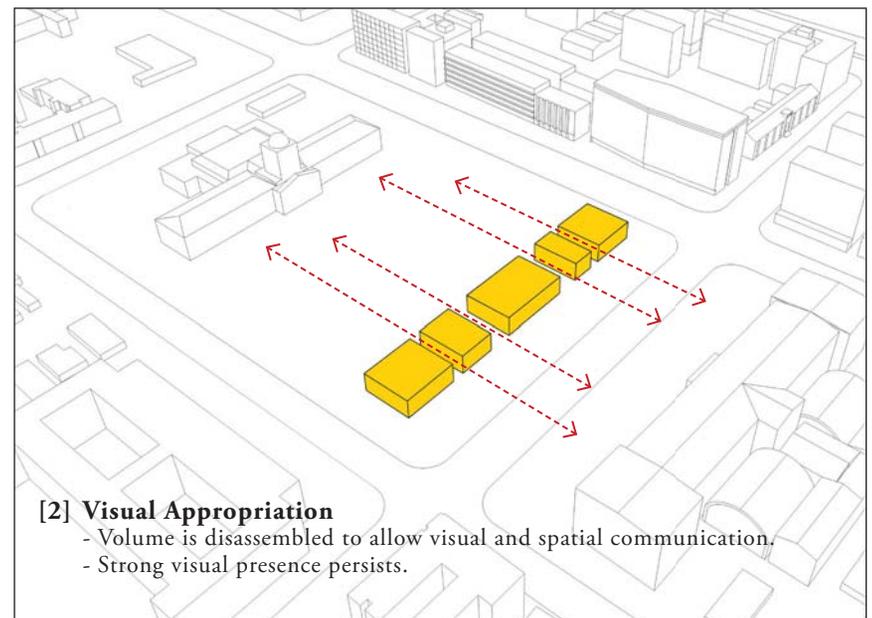


Fig. 99: Design process - Visual Appropriation (Author, 2011).

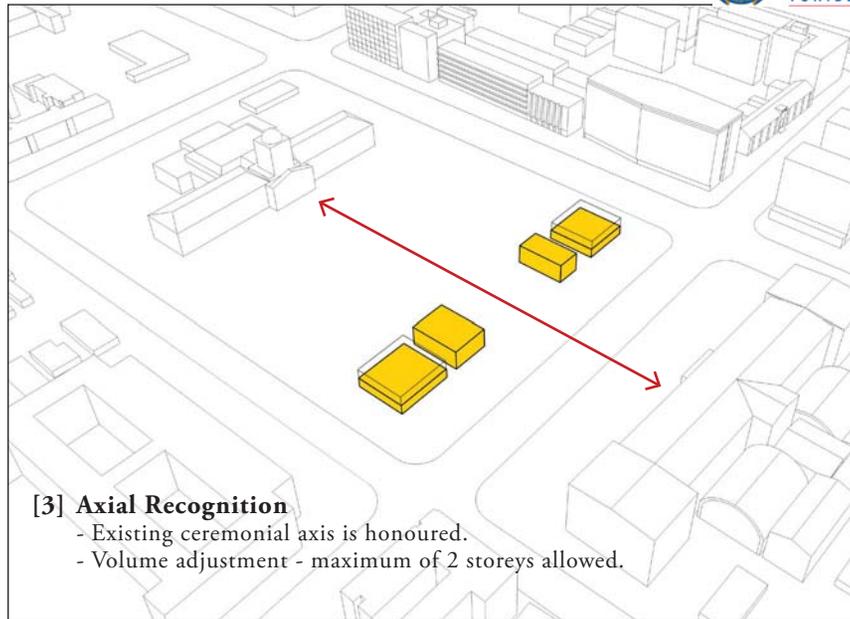


Fig. 100: Design process - Axial Recognition (Author, 2011).

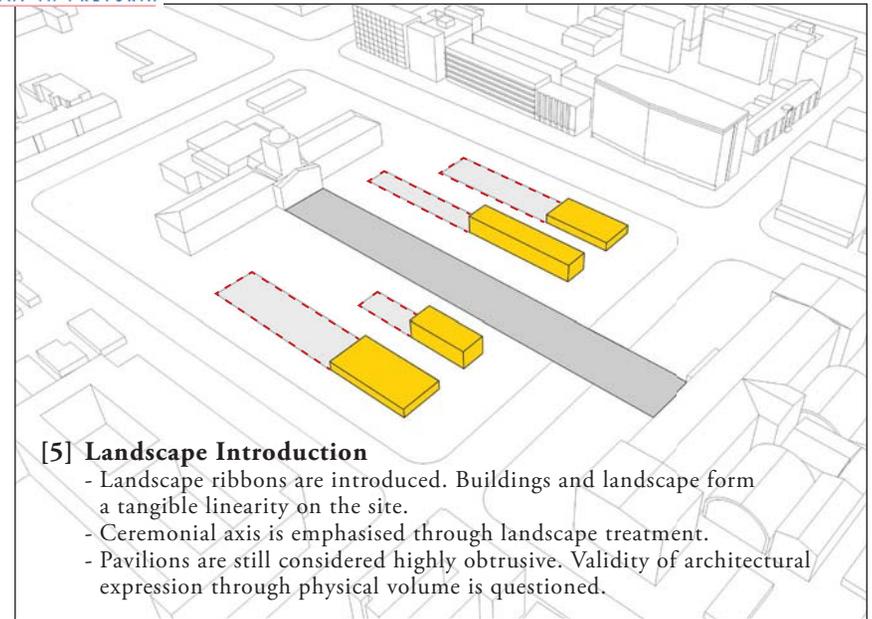


Fig. 102: Design process - Landscape Introduction (Author, 2011).

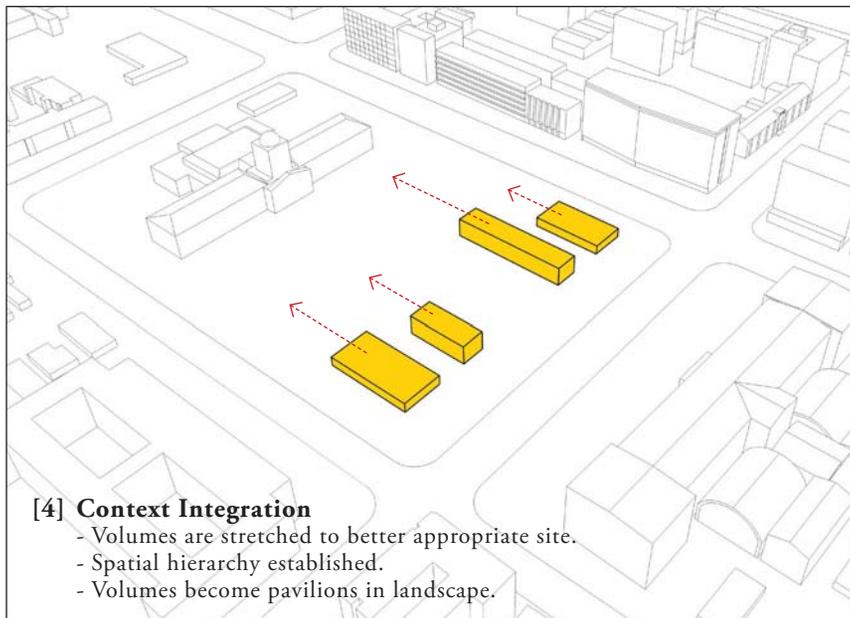


Fig. 101: Design process - Context Integration (Author, 2011).

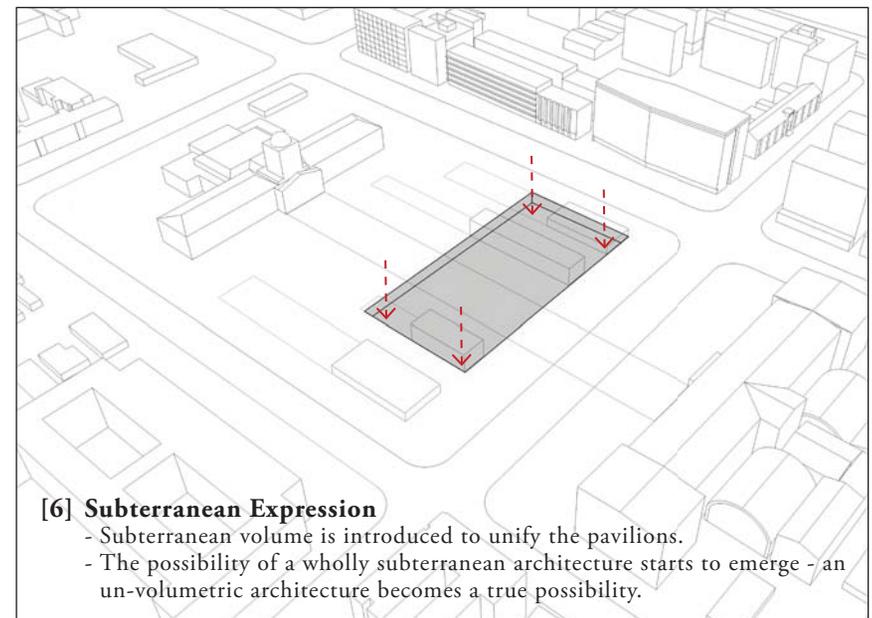


Fig. 103: Design process - Subterranean Expression (Author, 2011).

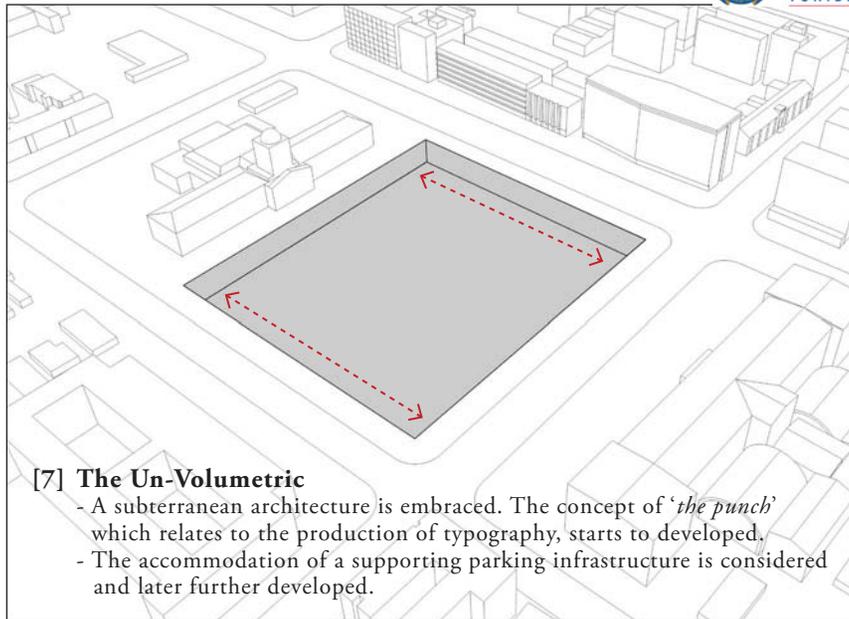


Fig. 104: Design process - The Un-Volumetric (Author, 2011).

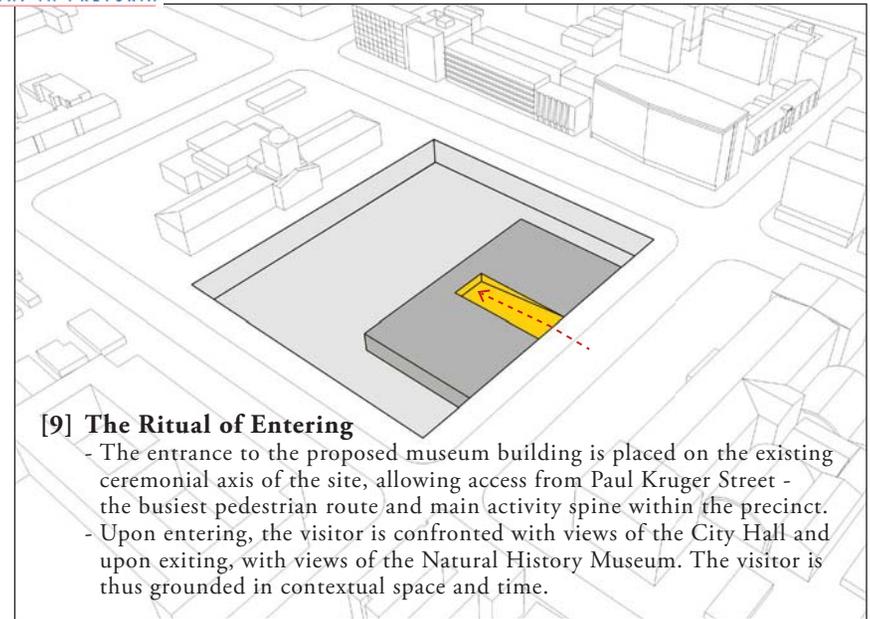


Fig. 106: Design process - The Ritual of Entering (Author, 2011).

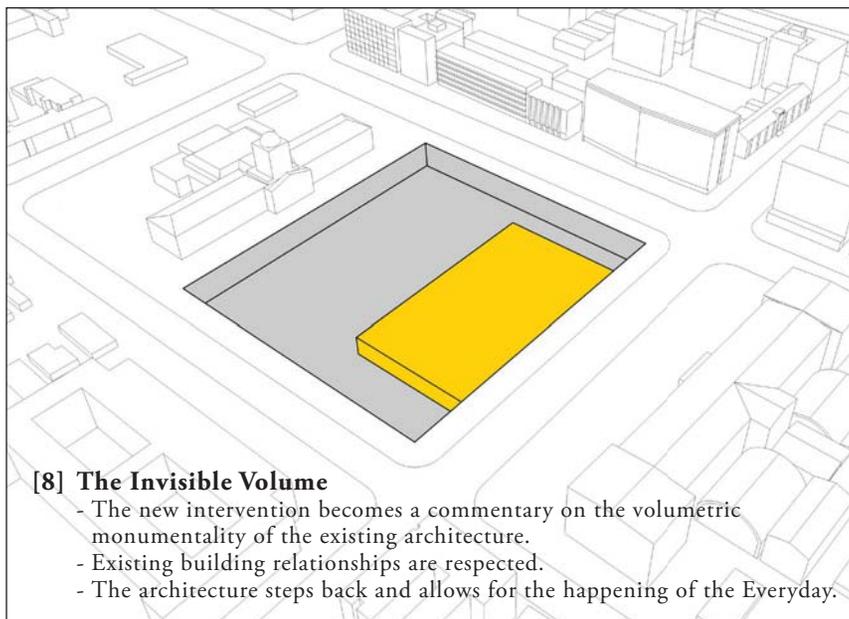


Fig. 105: Design process - The Invisible Volume (Author, 2011).

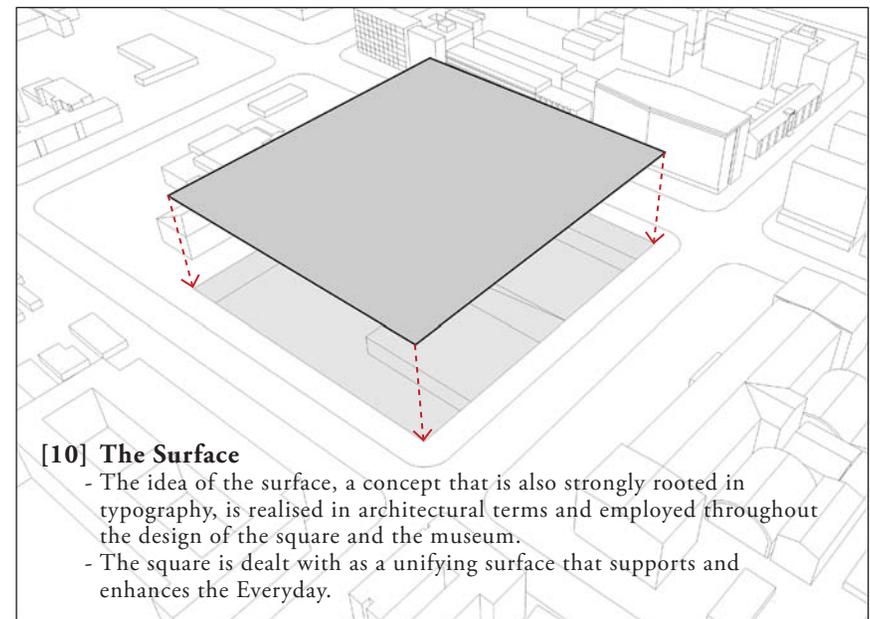


Fig. 107: Design process - The Surface (Author, 2011).

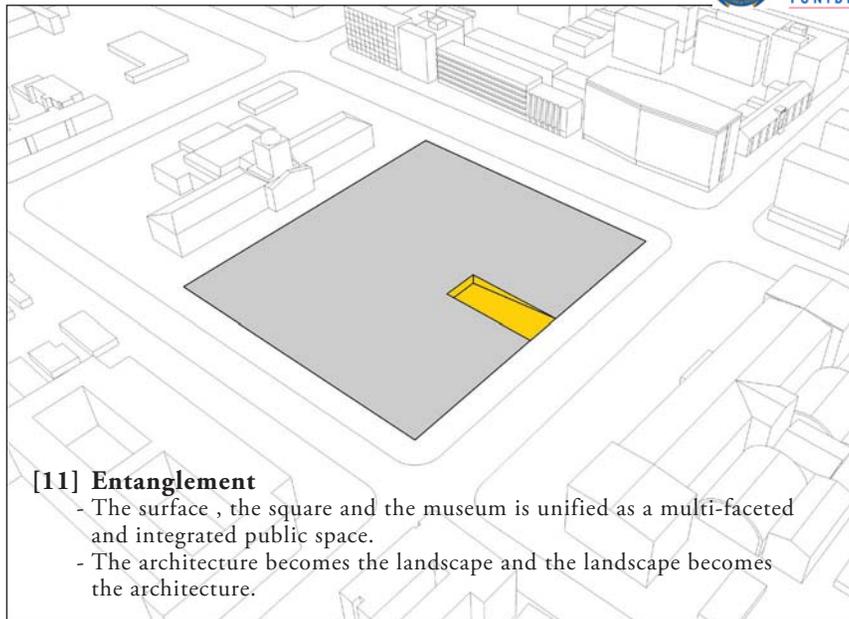


Fig. 108: Design process - Entanglement (Author, 2011).

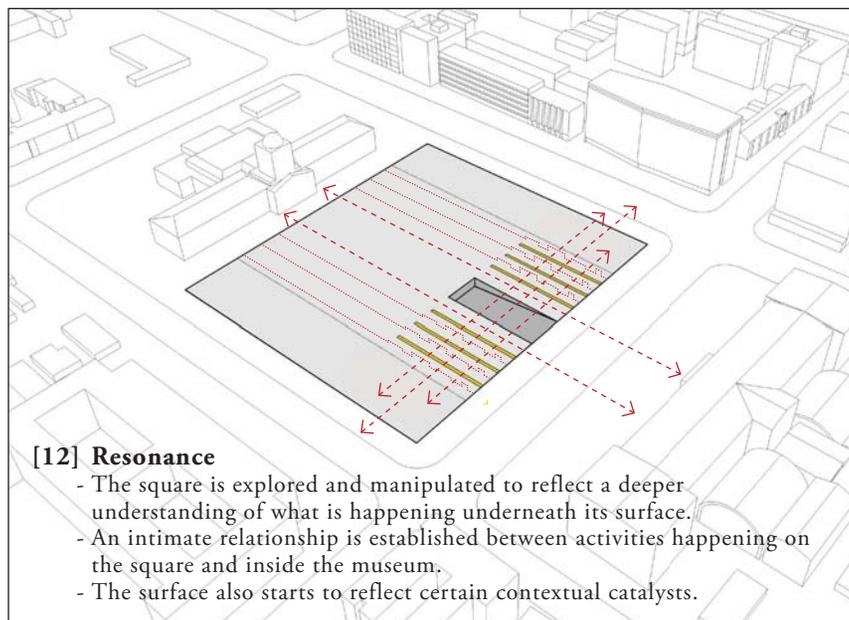


Fig. 109: Design process - Resonance (Author, 2011).



6.3 DESIGN INFLUENCES

6.3.1 SITE AS CATALYST

From the outset, it was very important to ground the design within its context and make the intended proposal relevant to its site and surroundings. An analysis was thus done (See Fig 93 - 100) regarding existing site conditions and consequent possible locations for the proposed intervention.

It was established that there exists a strong visual, physical and metaphysical relationship between the City Hall and the Museum of Natural History. Both of these buildings seem to be engaging in a dialogue with one another across Pretorius Square, with the square and the pedestrian day-to-day activities acting as medium for this *communication* (Fig 93). It is thus important to enhance and retain this relationship.

The context is also rich in history and heritage. Care will have to be taken with the intended design proposal in order for it not to detract from its setting.

With Paul Kruger Street on the eastern side of the square being the main activity spine through the precinct and the most active edge of the space, it was decided to locate the proposed intervention along this edge.

6.3.2 THE SURFACE

Typography and the making thereof stems from a deep fascination with the surface and how this surface can be designed to convey knowledge and information (Donaldson, 2008: 51). The notion of surface is also very dominant in architectural discourse and contemporary practice.

According to Benjamin (2006: 1) the surface should be understood to signify more that just a purely aesthetic or purely structural aspect of a building. The creation of surfaces must allow for the organization of programme and in so doing, the comprehension of space.

In architecture, walls should be liberated from being merely structural or tectonic elements, they should rather be recognized as objects that carry dual surfaces. In this manner, the surface and the wall will not succumb to being a merely static architectural element, but become a dynamic, space-creating entity (Benjamin, 2006: 5-7).

Gottfried Semper (in Spelman, 1997: 48) views the surface as a tectonic entity, and believes the surface should be employed to propagate the interweaving of both geometry and materials, thus allowing for the enclosure of volume and the definition of space.

Adolf Loos (in Benjamin, 2006: 24) advocates that the surface should also distribute and signify programme by allowing surface and volume to intersect.

The intended design will investigate the liberation of the surface in terms of the wall, with this concept also being extended to that of the roof and floor planes. Surfaces will be approached as both material and geometric entities, thus exploring volume enclosure and space definition.

6.3.3 LINEARITY

Because of the aforementioned relationship between the two buildings, there is a strong sense of linearity across the site. The activity along Paul Kruger Street also introduces a secondary axial linearity to the space, creating an interesting interplay and tension between these two conditions.

6.3.4 THE PUNCH

The design concept takes inspiration from the traditional method of hot-metal printing and typesetting. In this process, metal type was used in a letterpress to press or punch letterforms onto a surface (Pflughaupt, 2007: 14), leaving behind both the ink as well as a slight indent.

The museum is thus envisaged as a recessed subterranean volume - an indentation and a letterform in itself.

6.3.5 THE GRID

The concept of the grid is one of typography's fundamental characteristics. It is a reference system that guides the design of individual letters, page layouts and even whole books.

Grids establish systems of arrangement, coordinating content in the space of a page, a screen, or the built environment (Lupton, 2004: 113), allowing for time and space to be broken up into standardized, manageable units.

During the 1960's, the centuries-old model of the page-as-frame was rejected by the Swiss Rationalists (Ambrose & Harris, 2006: 78). They saw the page as a continuous architectural space, a space of indefinite progression outwards. The grid became both rational and sublime, defying boundaries and edges and became dominated by the mind rather than the body (Lupton, 2004: 134).

The concept of the grid will be employed to inform design decisions throughout the new proposal. Both the new museum and public square will endeavor to illustrate that an effective grid need not be a rigid formula, but rather a resilient and flexible structure that guides rather than dictates.

SCRIPTED

Museum

Operating Hours

Monday -Thursday: 08:00-18:30
Friday: 08:00-20:00
Saturday: 09:00-17:00
Sunday: 09:00-15:00
Public Holidays: 09:00-15:00

Facilities

Restaurant_Library_Bookshop_Workshop
Auditorium_Exhibition Spaces

Activities

Workshop

- Adult literacy classes
- Typography workshops
- Art workshops with artists like Willem Boshoff

Library

- Internet facilities
- After-school homework facilities
- Reference library with a comprehensive collection of works ranging from typography to language and art.

Restaurant

- 08:00-12:00
- Express coffee shop
- 12:00-17:00
- Coffee shop with light lunches
- 18:00-till late
- Destination restaurant

Auditorium

- Seminars
- Public lecture series
- Book launches

Events

- Hosting *National Book Week*
- Hosting a Pretoria edition of the *Woordfees*
- Hosting *TypeCon* (See Chapter 01, 1.8.5 Client)

Schedule of Accommodation

Basement -1

Entrance/Reception.....	175m ²
Coffee Bar.....	35m ²
Restaurant.....	145m ²
Restaurant Manager Office.....	9,5m ²
Restaurant Kitchen.....	73m ²
Security Office.....	23m ²
Cleaning Room.....	16m ²
Office Reception.....	38m ²
Curator Office.....	41m ²
Boardroom.....	28m ²
Open Plan Office.....	150m ²
Server Room.....	14m ²
Staff Kitchen 1.....	14,5m ²
Staff Kitchen 2.....	22m ²
Staff Bathroom 1.....	10m ²
Staff Bathroom 2.....	34m ²
Bookshop.....	110m ²
Workshop.....	110m ²
Library.....	330m ²
Auditorium.....	162m ²
Museum Bathroom 1.....	89m ²
Museum Bathroom 2.....	63m ²
Storage 1.....	67m ²
Storage 2.....	42m ²
Gallery 1_Temporary.....	705m ²
Gallery 2.....	162m ²
Gallery 3.....	1070m ²
Courtyard_Library.....	72m ²
Courtyard_Restaurant.....	72m ²
Courtyard_Offices.....	130m ²
Plant Room.....	93m ²

Public Square

Operating Hours

24/7_365 days a year

Facilities

- Formal event space
- Spaces for the happening of the Everyday

Activities

- Hosting of organised events
- Allowing for the urban event and the happening of the Everyday

Schedule of Accommodation

Basement -2

Storage 3_Acquisitions.....	540m ²
Storage 4.....	40m ²
Gallery 4.....	1050m ²
Gallery 5.....	250m ²
Gallery 6.....	172m ²
Plant Room.....	68,5m ²

Parking

Basement -3.....	490 Parking bays
Basement -2.....	390 Parking bays
Basement -1.....	220 Parking bays

Public Square

Event Space_Informal.....	3500m ²
Event Space_Formal.....	5050m ²

Fig. 110: Proposed business plan and schedule of accommodation (Author, 2011).



6.4 THE EXPERIENCE

6.4.1 THE DESTINATION USER

It was through a friend of mine that I first heard of this new museum located in the inner city of Pretoria, supposedly a museum unlike any other, a museum going by the name of *Scripted*. So, after an arduous week at work I set out on a sunny Saturday morning to explore this new inner city attraction, with the need to let my mind escape and my body relax.

Driving down Visagie Street one is all of a sudden confronted with the presence of the City Hall. Stepping back from the edge of Paul Kruger Street, this Neoclassical building seems to be in deep conversation with the Natural History Museum directly opposite it. In-between these two monuments lie an expanse of public square, a breathing space away from the hustle and bustle of the city. It is here, supposedly, that the new museum resides, but for some reason there is no physical presence on the square, no volume to speak of.

Climbing out of my car in the parking basement I can't help but notice the up-lit coffer concrete ceiling, a sky of texture stretches out above me. Strands of lighting and services snake in linear stretches across the soffit, which affords a certain elegance to the space. Two of the basement walls are awash with sunlight and embossed with inlays of quotes and typefaces. The scene is set.

The circulation lobby is well branded and easy to find, and as I move towards this floating glass box, I am offered visual hints and clues that allude to the existence of the museum - glimpses of an interior and of an invisible volume.

Taking the stairs to the square (there is no direct access into the museum from the parkade) one is confronted with framed views into the museum and slowly the museum space becomes tangible.

Emerging on the square one is immediately met by the monumental presence of the City Hall, its classical proportions and its ornate facade. Still - no museum of typography.

Underfoot, a landscape of texture unfolds - bands of granite gracefully intertwine and intersect - picking up the energy of the site. I am slowly guided towards the entrance to this, as of yet, unseen museum building by carefully placed signage and text-tiles on the square's surface. As I progress towards Paul Kruger street the landscape starts to ripple, swell and heave. Elements of planting and seating start punching through this seemingly unifying surface, and unknowingly signals a change somewhere deeper underneath.

Arriving at the Paul Kruger street edge with the Natural History Museum keeping a careful watch over my every move, the new museum's entrance presents itself, opening up in an embrace, tempting me to come inside.

Descending down the ramp I am only afforded glimpses into the flanking spaces. Gradually I feel the museum's presence and I finally comprehend the architecture's humble approach to its context.

Once inside, I immediately notice the texture of the space. Not only in the use of the off-shutter concrete surfaces that change depending on the spatial programme and configuration, but also in the way that light and shadow is used to animate the space itself, providing depth and emphasis throughout. The passage of time also becomes tangible through the interplay of these shadows.

Careful consideration has been given to the choice of materials and colour palette in order to convey a reserved elegance. In this (anti)monument to typography, concrete, glass, steel and timber work harmoniously together to form a minimalist backdrop for the items on display.

Moving through the museum, it becomes evident that the transition from one space to another has been greatly considered in the design process. These interstitial spaces are treated as intermediary pause and reflect areas that forces one to take note of where you are heading and where you came from. These transition thresholds enrich the whole museum experience as one is constantly made aware of your position in relation to the architecture.

Looking around inside the building, I notice another very striking element in the design - the extensive use of skylights that frame views upwards and outwards. These linear light-lines allow daylight to flood the space and establish a relationship between what is happening on the square and what is taking place inside the museum. In addition, there are various sunken courtyards that one discovers within the museum, further strengthening the bond between above and below. These spaces offer a break from the subterranean spatiality of the architecture and allows you to recollect your thoughts before continuing on your journey.

As I exit the museum along the same ramp from which I entered, I can't help but feel enlightened - I now have a better understanding of the intricacies of typography and the vital role it plays in our everyday lives. And yes, at first, the idea of a wholly subterranean architecture is slightly unsettling, but the elegant and complex spatiality offered by *Scripted's* volumetric expression is completely and utterly enthralling.

6.4.2 THE EVERYDAY USER

Heading down to Pretorius Square to enjoy my roast chicken sandwich, I can't help to feel excited. It has been three weeks since the opening of the redesigned square, and still, I cannot get enough of this place. Everywhere people are going about their day-to-day routines. People talk about what's going on in the news, about how unreasonable their spouses can be and how much they enjoy this time of year. Kids run around chasing unseen foes, laughing and playing on the grass and between the trees and the benches.

As I make myself comfortable in the cool shade of a tree, I recline on one of the many benches strewn across the square and I think back to the opening event. It was a night filled with music performances, art installations, food stalls, old friends and new lovers - the atmosphere was electric. The city and the local community welcomed and fully embraced this new public space .

With my thoughts trailing, I sit and people-watch, one of my favourite distractions, and I notice just how many people now frequent this part of the city. Yes, it always used to be busy, but now, instead of just the daily commuters hurrying down Paul Kruger street there is a better appropriation of this space, people take notice and make use of the facilities on offer.

The typography museum that lies underfoot offers welcome distractions from the happenings on the square. Its unusual subterranean location seems to beguile people passing by and they tend to be drawn to it - if only out of mere curiosity. The museum also offers various education and community programs and with admission being free, the museum seems to ensure a constant wave of return visitors - a few of these faces look all too familiar.

As I finish my last bite of my sandwich I catch a glance of a girl inside the museum. As she moves from the one artwork to the next, she glances up and catches my eye - she smiles and waves. I wave back and then she is lost in the depths of the museum and I walk back to the office with the Highveld sun on my back and a skip in my step.



6.5 DESIGN AND CONCEPT SKETCHES

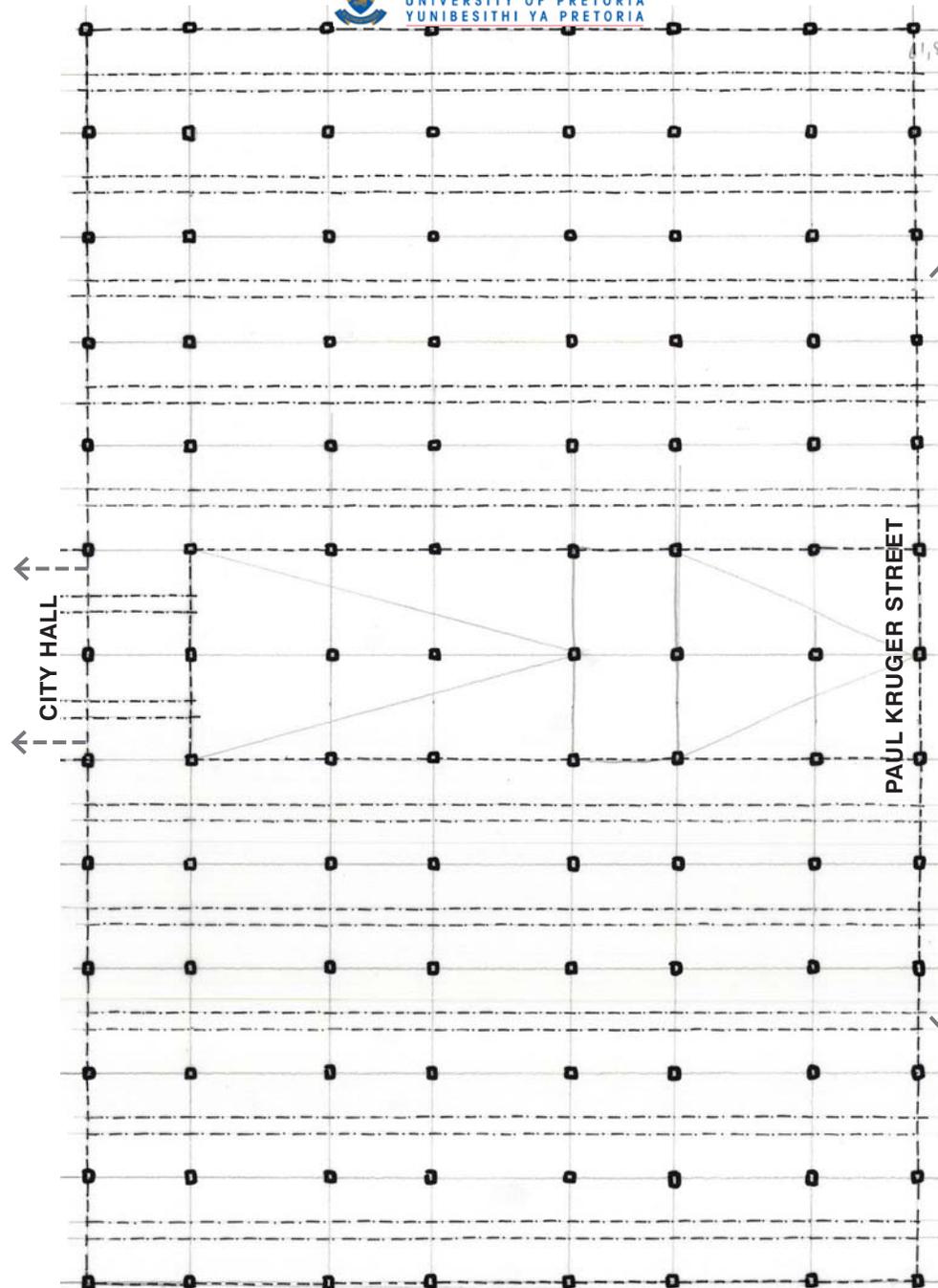


Fig. 111: Establishment of the Grid. The Grid went on to inform and guide the majority of design decisions - from surface treatments to material use and the placement of internal walls, skylights and landscape elements (Author, 2011).

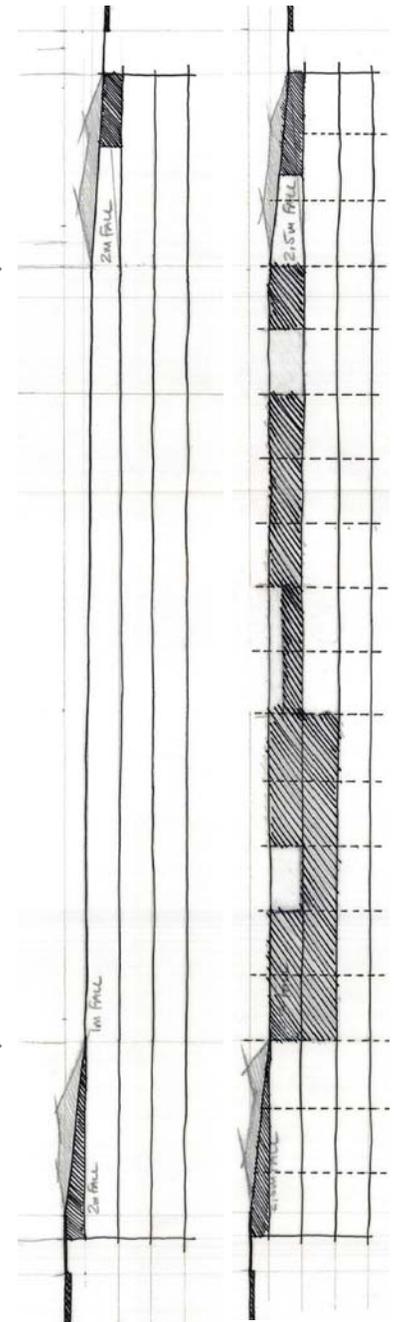


Fig. 112: Investigation of the levels on site (Author, 2011).

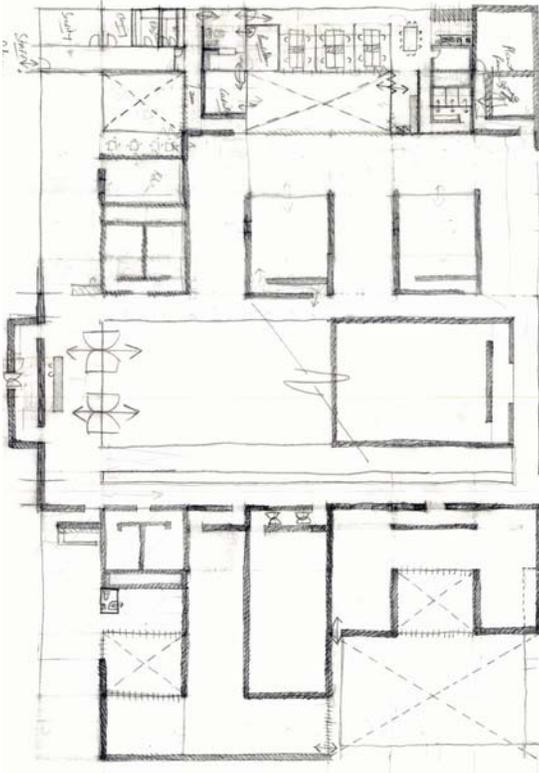


Fig. 113: Possible floor layout for the first subterranean floor of the museum (Author, 2011).

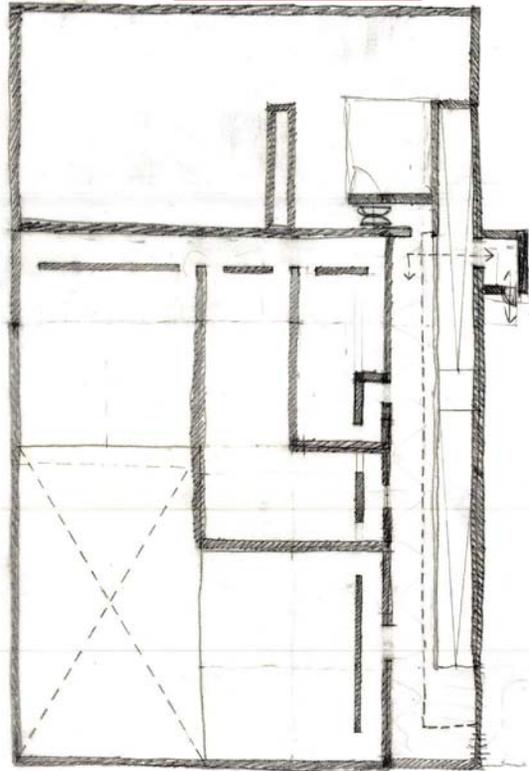


Fig. 114: Possible floor layout for the second subterranean floor of the museum (Author, 2011).

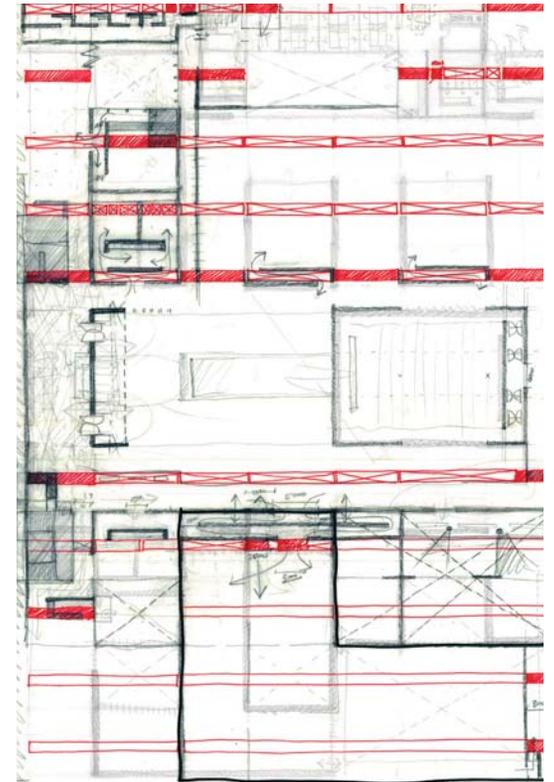


Fig. 115: Investigation of skylight placement in relation to a revised spatial layout (Author, 2011).

6.6 DESIGN DRAWINGS

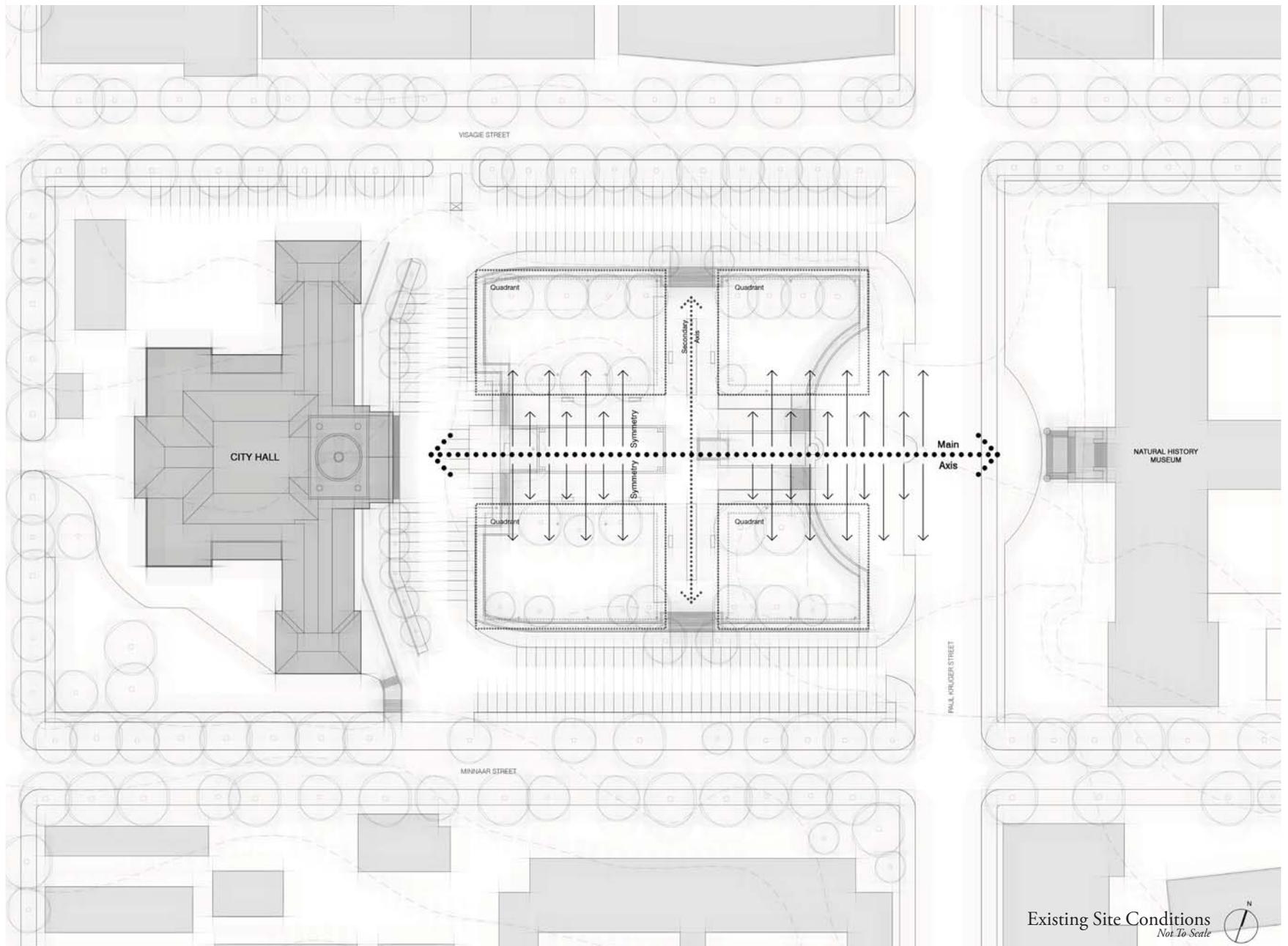


Fig. 116: Existing site conditions (Author, 2011).

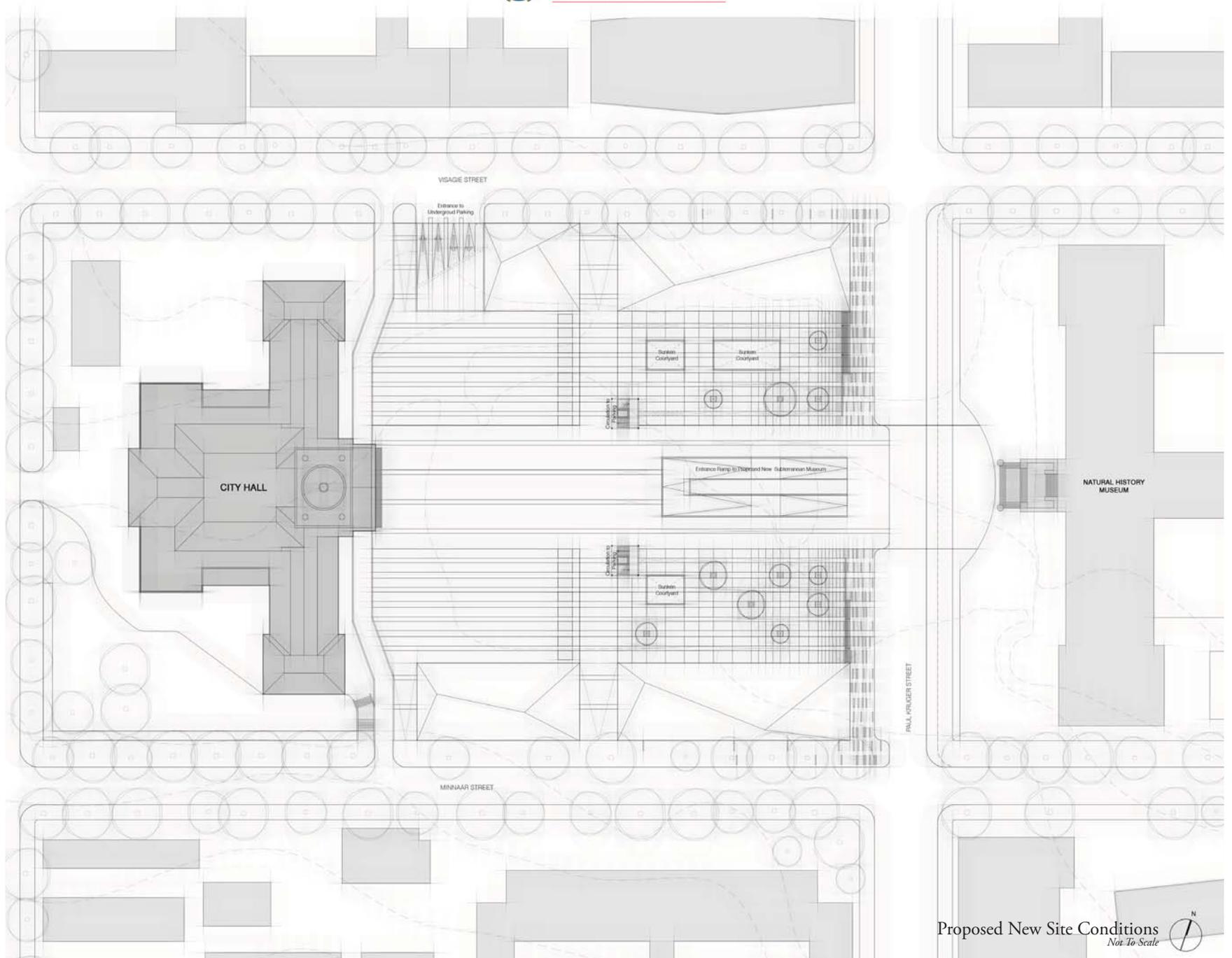


Fig. 117: Proposed new site conditions (Author, 2011).

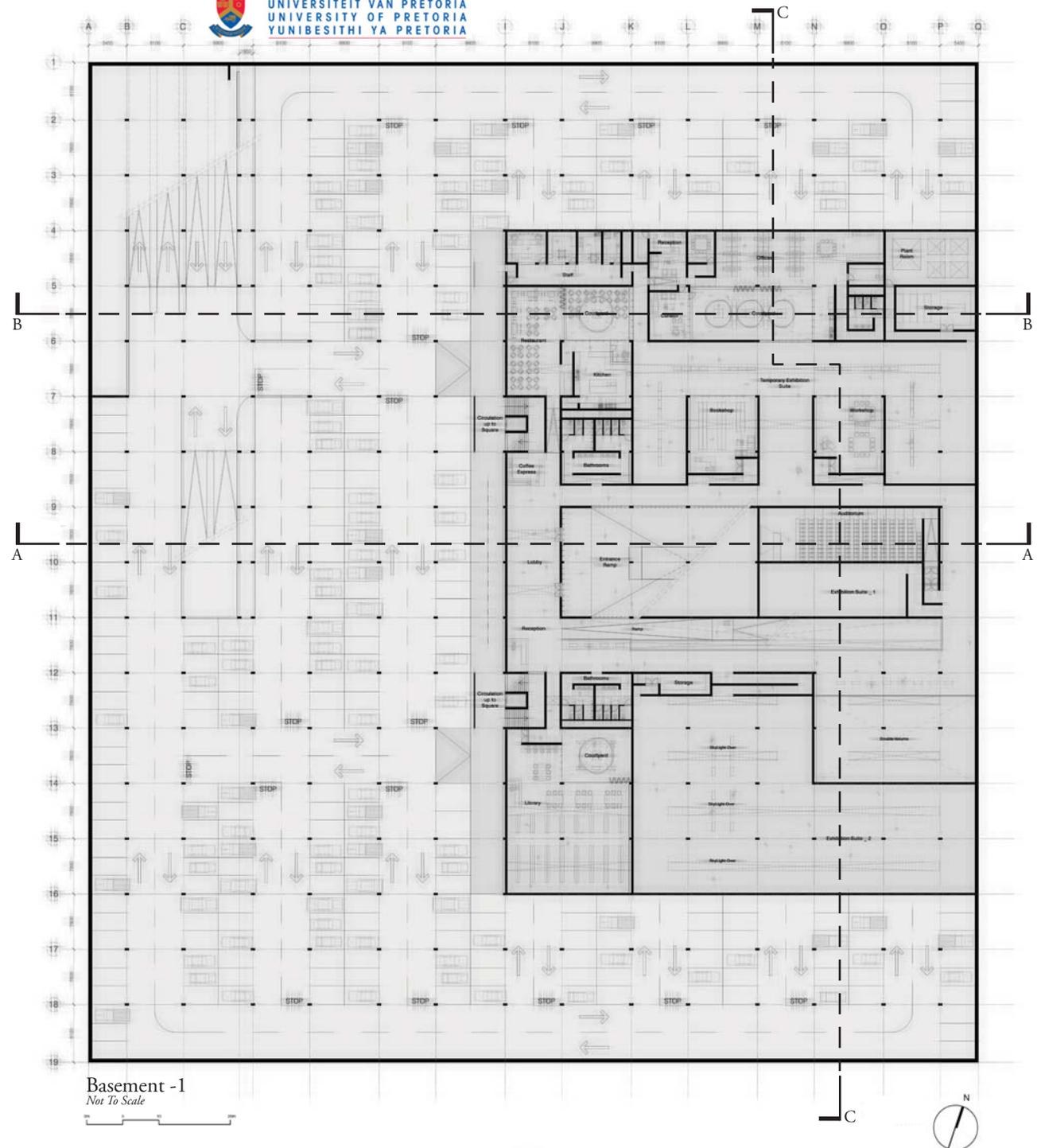


Fig. 118: First subterranean floor of proposed new museum (Author, 2011). Drawing does not represent further developed design - See Chapter 8.

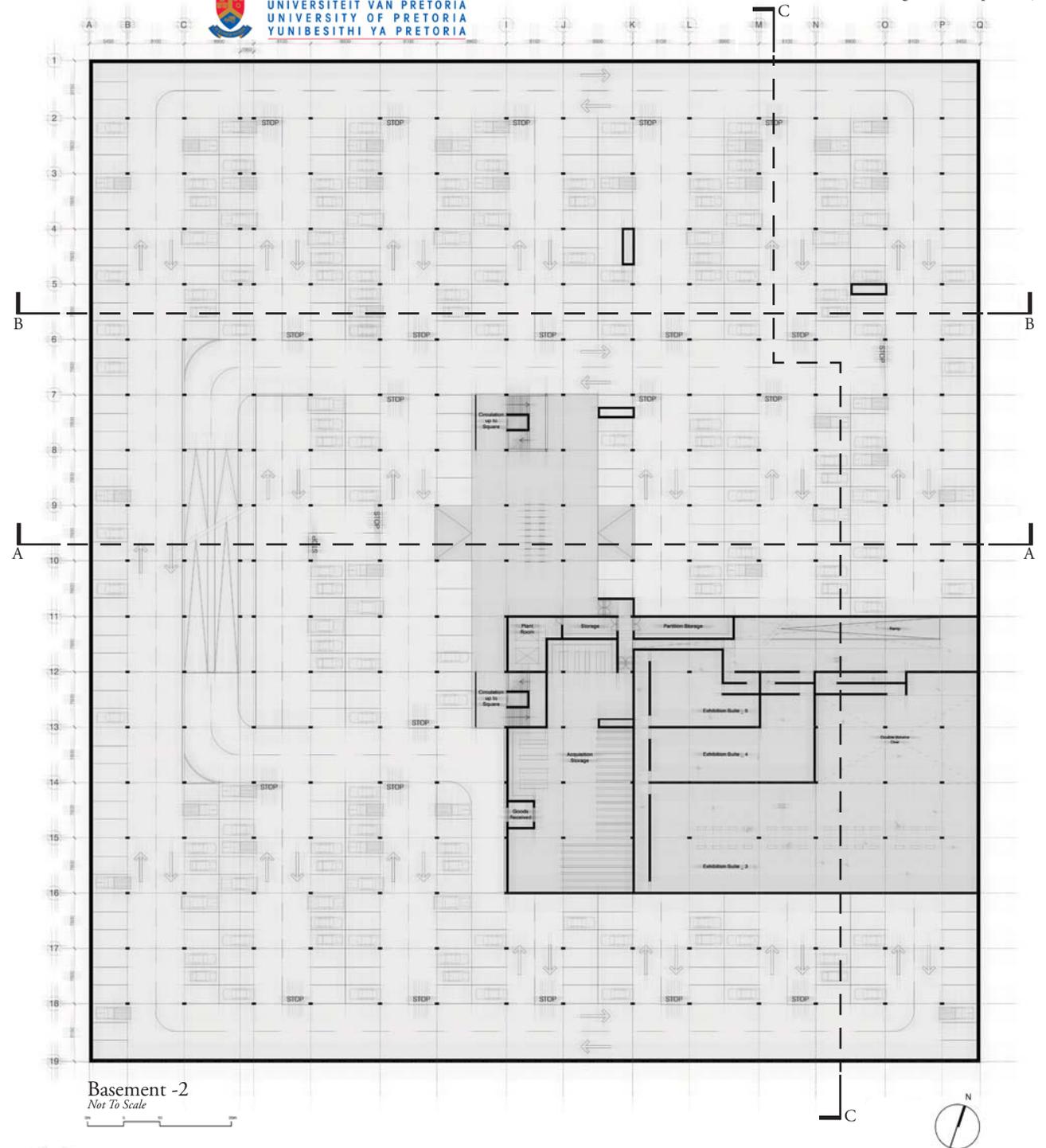


Fig. 119: Second subterranean floor of proposed new museum (Author, 2011). Drawing does not represent further developed design - See Chapter 8.

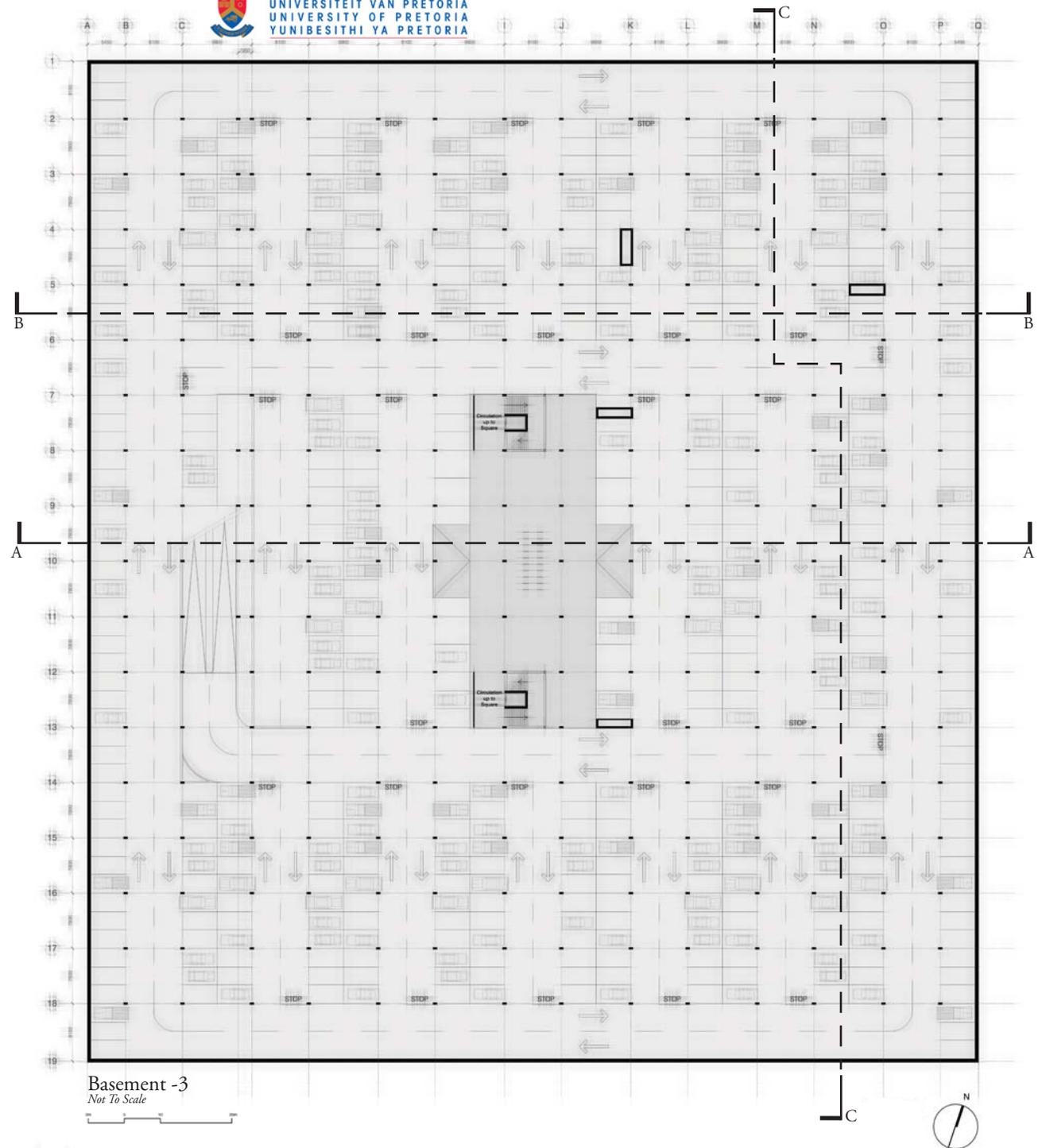


Fig. 120: Third subterranean floor of proposed new museum (Author, 2011).

Basement -3
Not To Scale



Fig. 121: Interior view illustrating museum spatiality (Author, 2011).

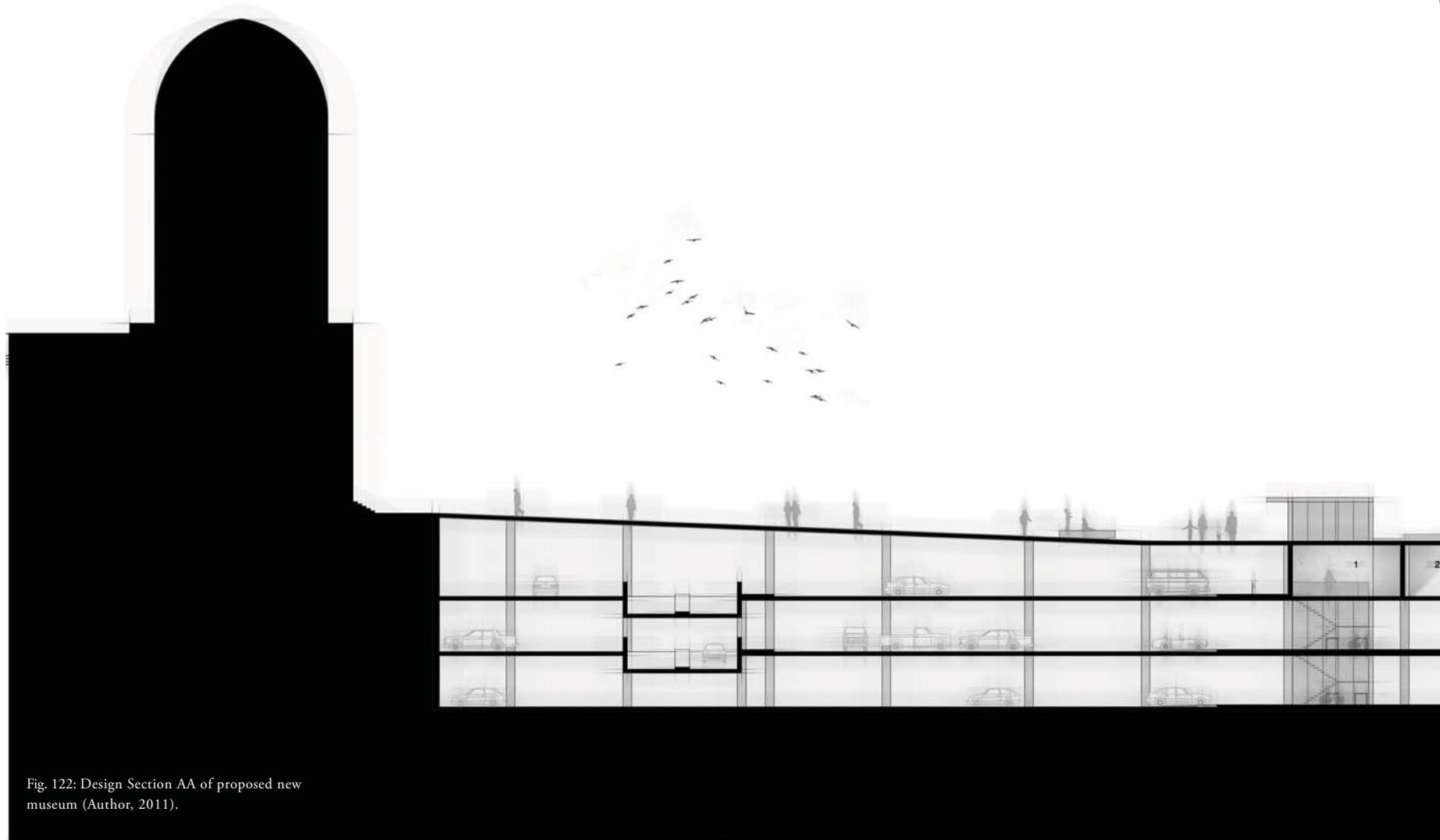
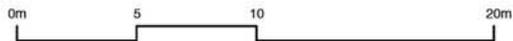
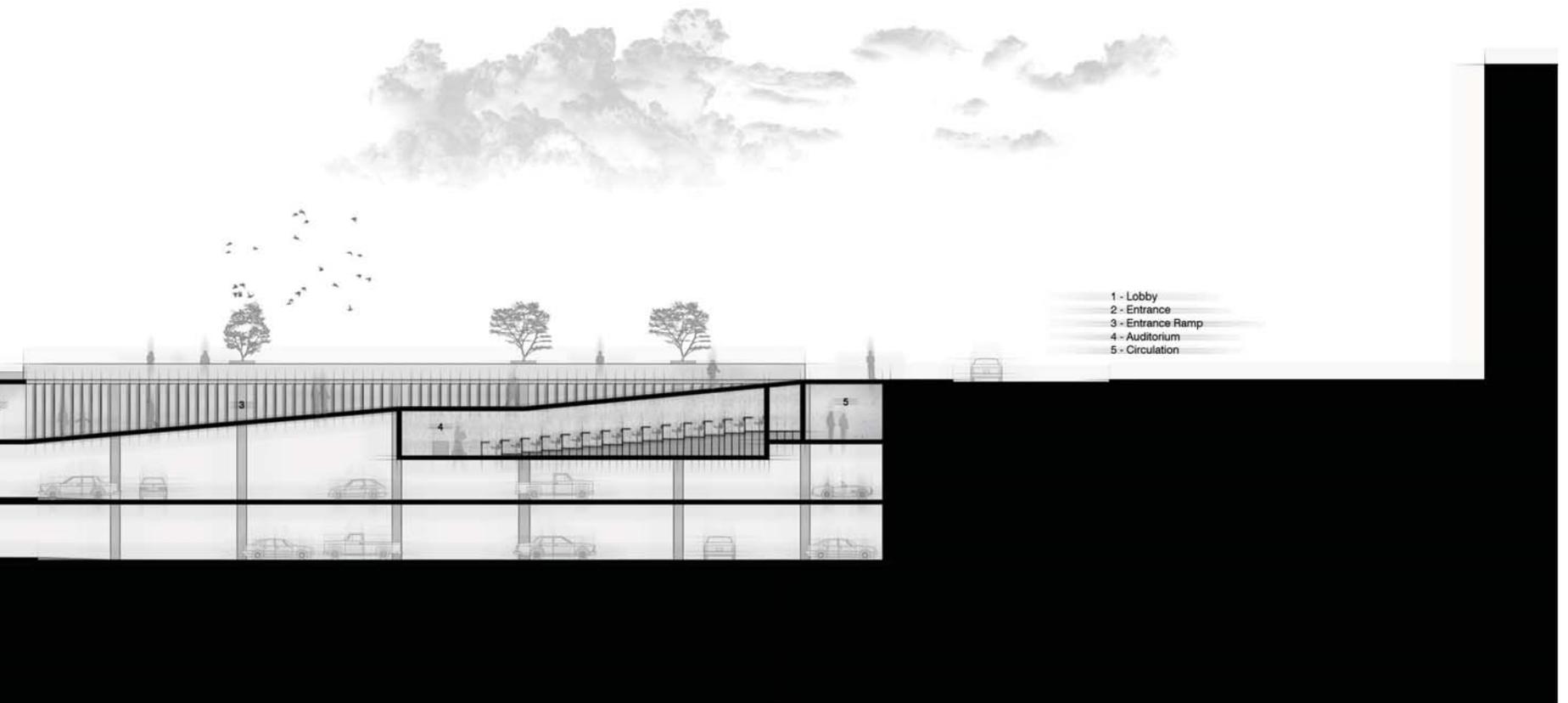


Fig. 122: Design Section AA of proposed new museum (Author, 2011).



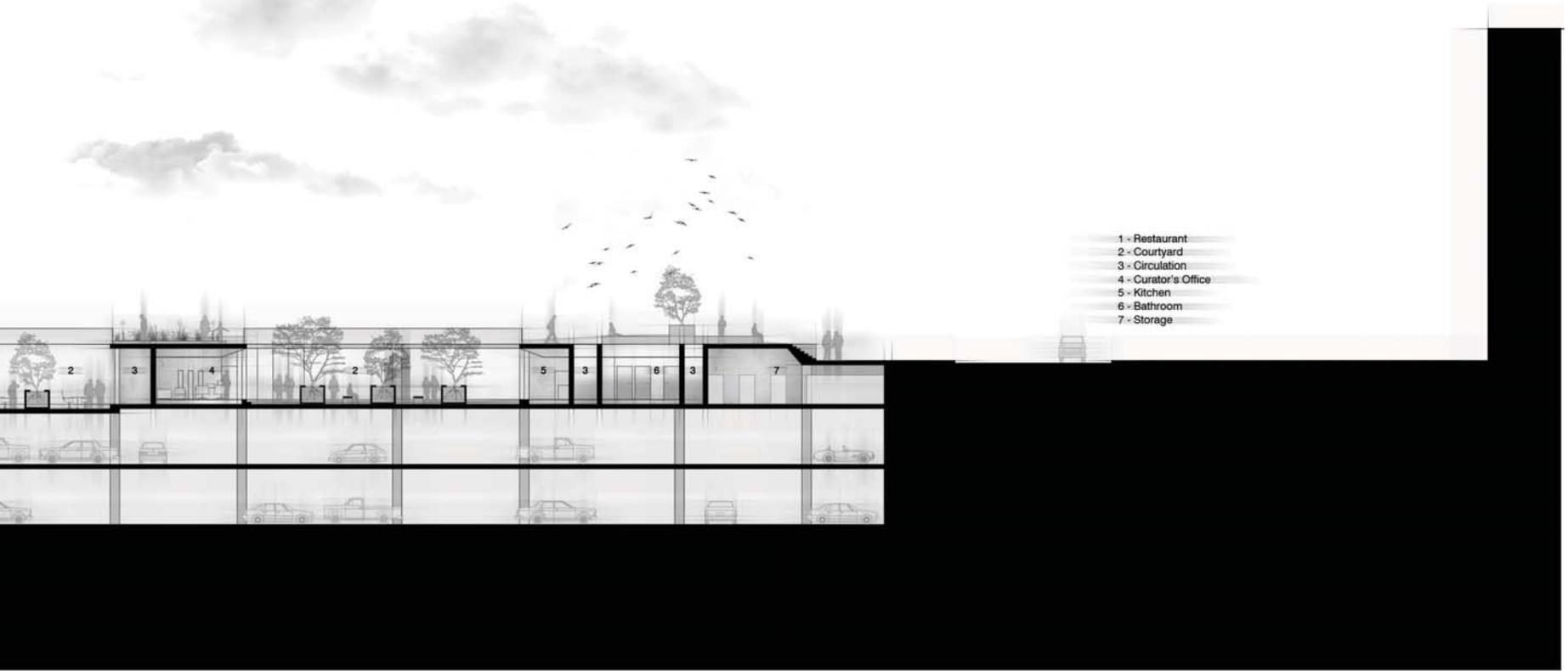


Section AA
Not To Scale



Fig. 123: Design Section BB of proposed new museum (Author, 2011). Drawing does not represent further developed design - See Chapter 8.

0m 5 10 20m



Section BB
Not To Scale

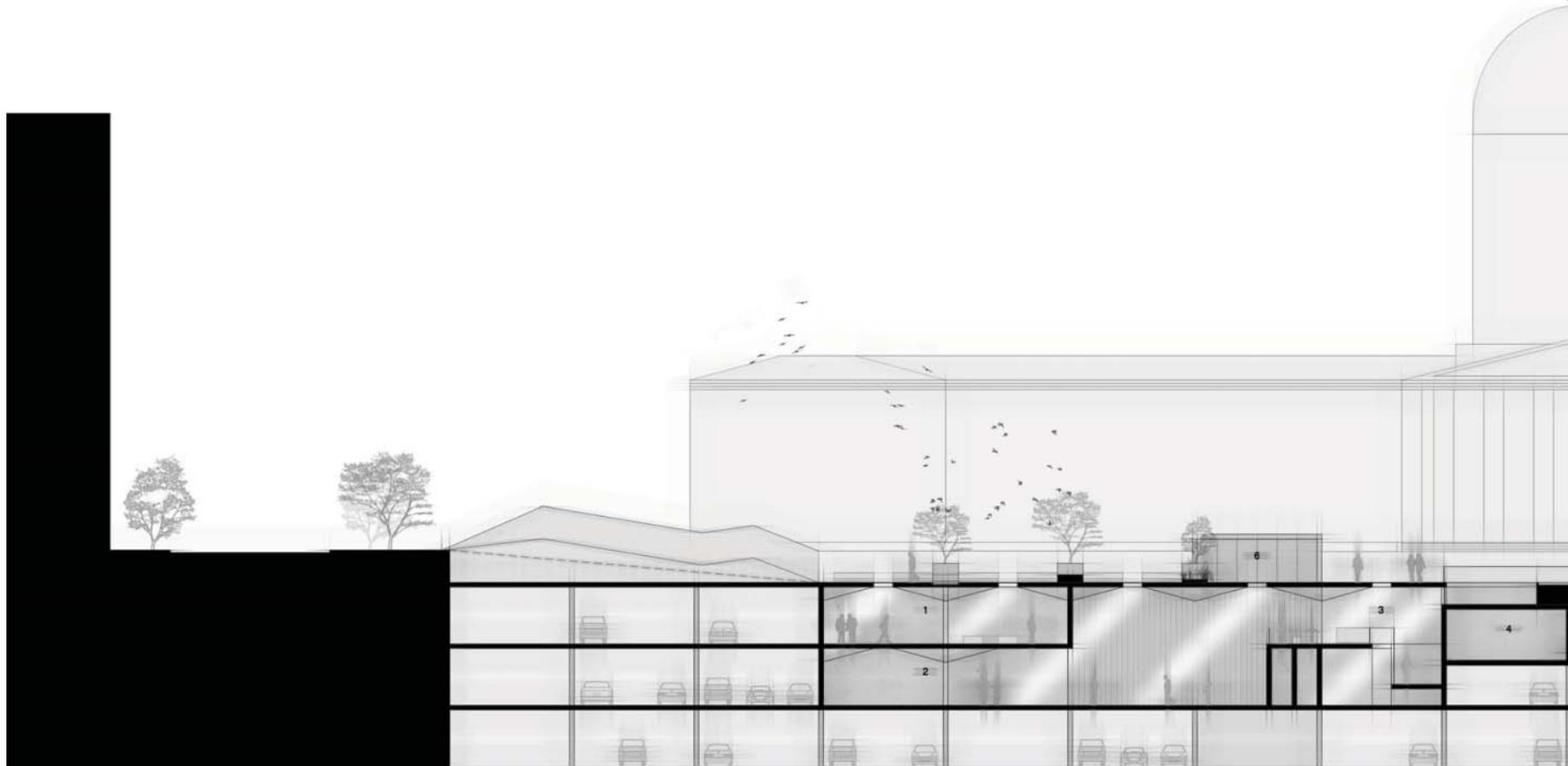
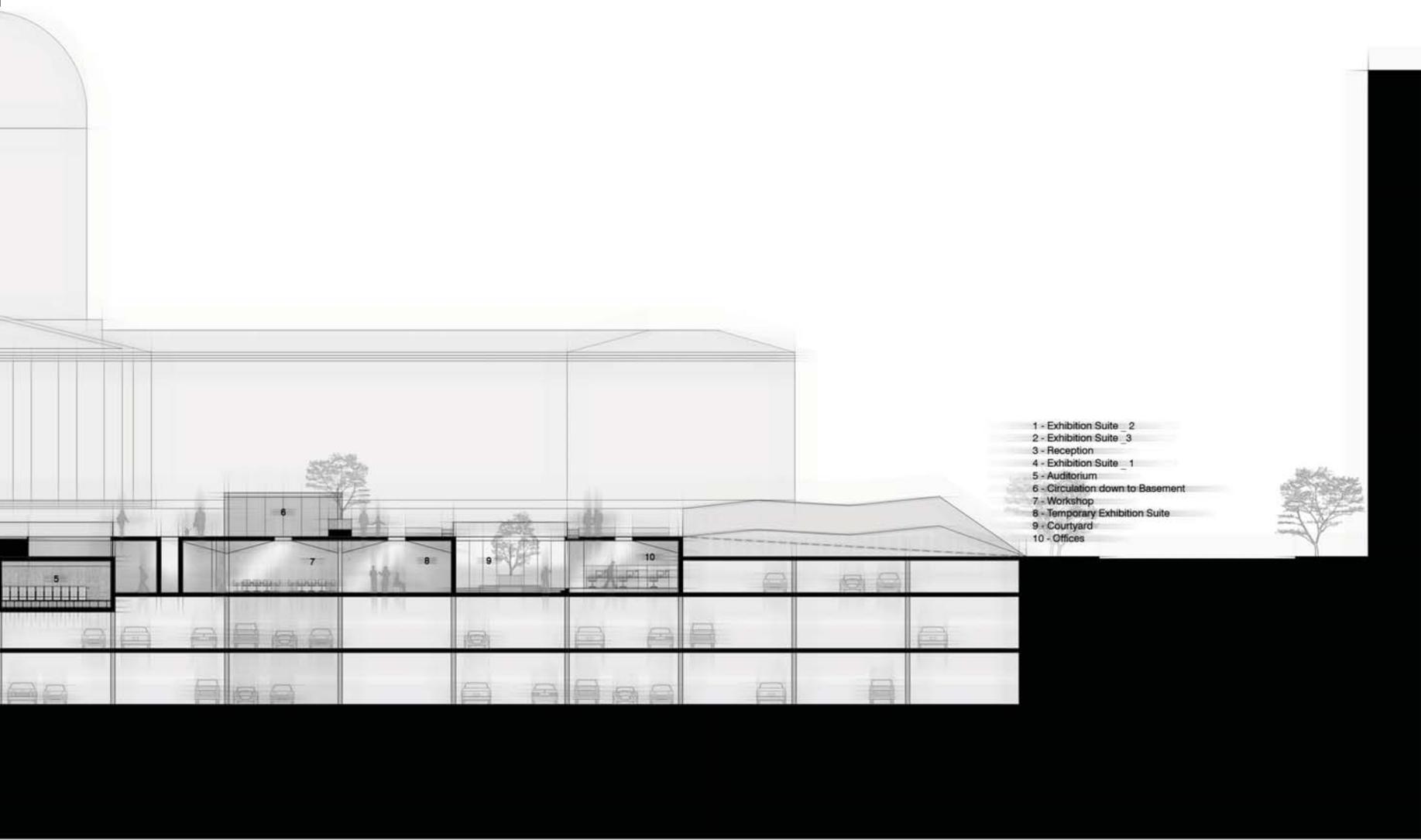


Fig. 124: Design Section CC of proposed new museum (Author, 2011). Drawing does not represent further developed design - See Chapter 8.

0m 5 10 20m



- 1 - Exhibition Suite - 2
- 2 - Exhibition Suite - 3
- 3 - Reception
- 4 - Exhibition Suite - 1
- 5 - Auditorium
- 6 - Circulation down to Basement
- 7 - Workshop
- 8 - Temporary Exhibition Suite
- 9 - Courtyard
- 10 - Offices

Section CC
Not To Scale



Technical Investigation



7

TECHNICAL INVESTIGATION

7.1 STRUCTURE

The main structural system used in the design and conceptualisation of the proposed intervention, is a concrete column and slab structure. Because of the subterranean character of the design it was felt appropriate to make use of a material that offers unparalleled structural integrity and durability (Cement and Concrete Institute, 2009).

Throughout the design, concrete is utilised both to provide the permanent grid infrastructure for the overall complex as well as most of the infill elements within the museum building.

Within the parking garage, a steel reinforced concrete coffer-slab construction was chosen. In keeping with the concept of *the punch* and *the surface*, the texture and recesses of the coffers, enhanced the conceptual thinking behind the design. This method of construction was also preferred because of its aesthetic appeal as well as the various benefits in terms of structural robustness and economic use of material. The slab construction within the museum building itself is a steel reinforced concrete flat slab with an off-shutter finish. This decision was made because the design called for a shift in materiality to signal a change in the spatial configuration and programme.

The column grid used in the design is determined by the parking layout. This grid subsequently guides the spatial configuration of the museum and landscaped elements, as well as the treatment of surfaces and placement of architectural and design elements.

The columns are 300mm x 600mm in size and spaced on a 7800mm x 8100mm/9900mm grid, with a floor to soffit height of 3570mm. The flat and coffer slabs are 400mm thick, with the coffers sized at 900mm x 900mm with a 225mm depth.

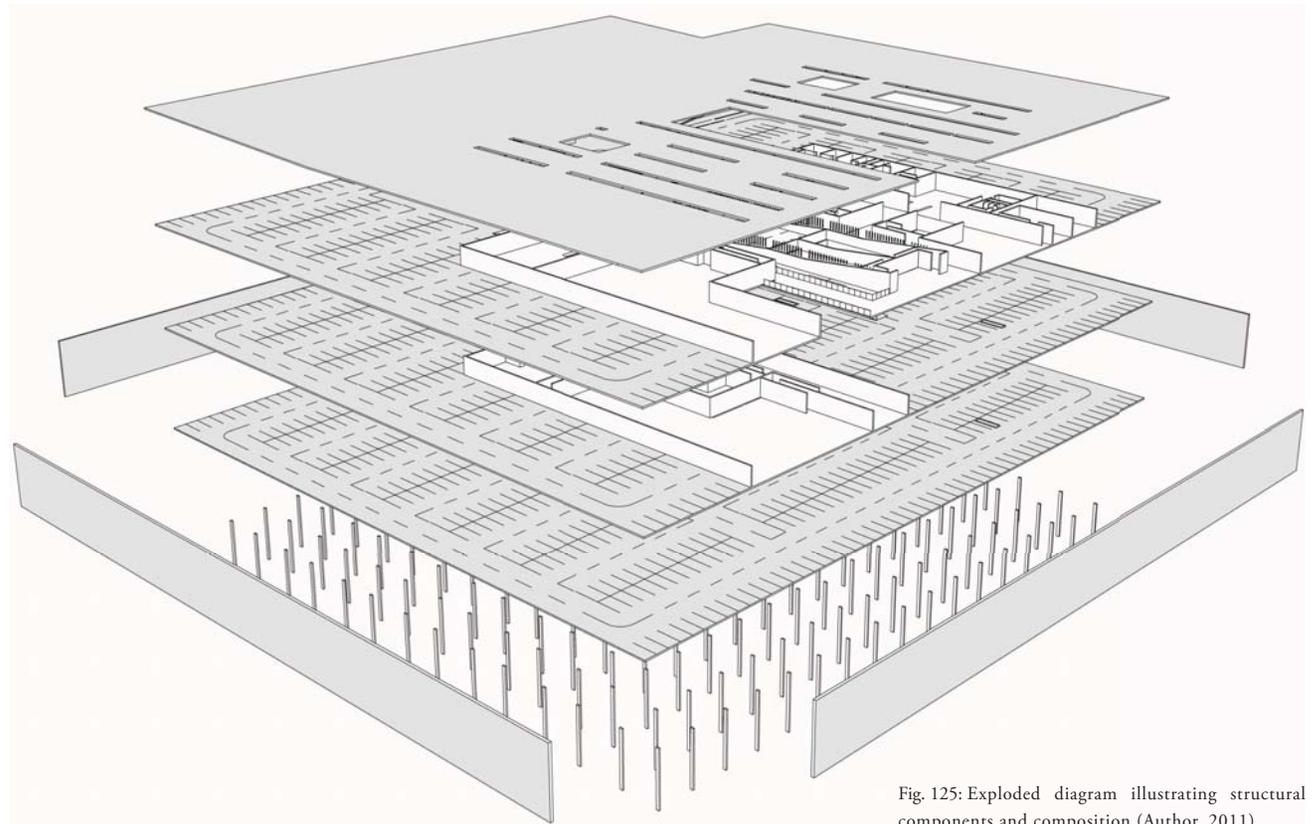


Fig. 125: Exploded diagram illustrating structural components and composition (Author, 2011).

7.2 ROOF CONSTRUCTION

The design of the museum was conceived of as an anti-volume, an architecture that has no physical outward volumetric expression. The architecture submerges itself within the ground and acts as a platform that supports the landscape - the roof of the building becomes the surface of the public square.

Similar to the rest of the building, the roof of the museum and parking garage is steel reinforced concrete. The exterior of the roof becomes the public square which has the reinforced concrete as support structure, but is mainly finished in granite tiles that are supported on polypropylene pedestals. The tiles are 1000mm x 600mm in size with 5mm spacing. Together with the granite tiles, composite EcoDecking is installed on an aluminium joist system, also supported on the pedestals. Because the system is elevated 200mm above the concrete roof, it allows for the waterproofing, insulation and stormwater management to be concealed, resulting in a seamless and unobtrusive construction.

Within the roof structure there are various openings that are articulated as skylights on the interior of the museum, allowing for daylight to flood these spaces. The skylights also provide a connection between inside and outside, heightening the individual's perception of what happens above and below. The concept of linearity is also strengthened by means of linear light-lines on the exterior surface of the square. These recessed lighting elements emulate the positioning of the skylights and provide for dramatic lighting at night.

In certain places the roof also gives way to form courtyards that are accessible from the museum. The courtyards are viewed as depressed planes within the uniform surface of the square and alludes to the presence of the museum underfoot.

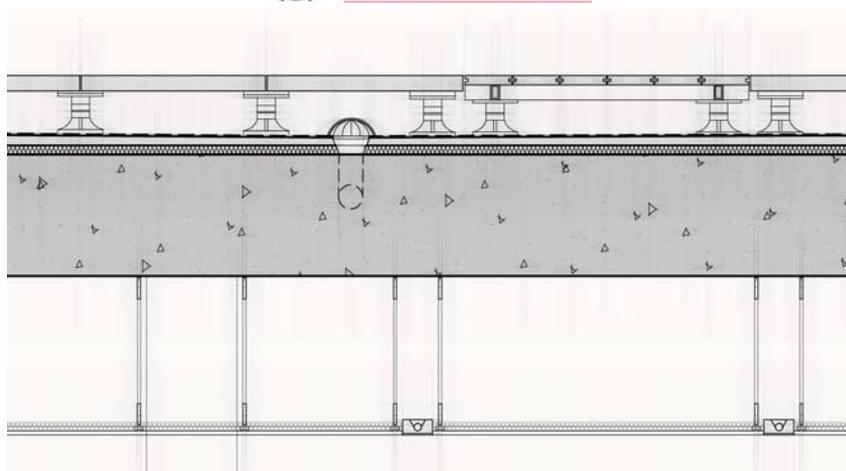


Fig. 127: Roof construction. Scale 1:25 (Author, 2011).

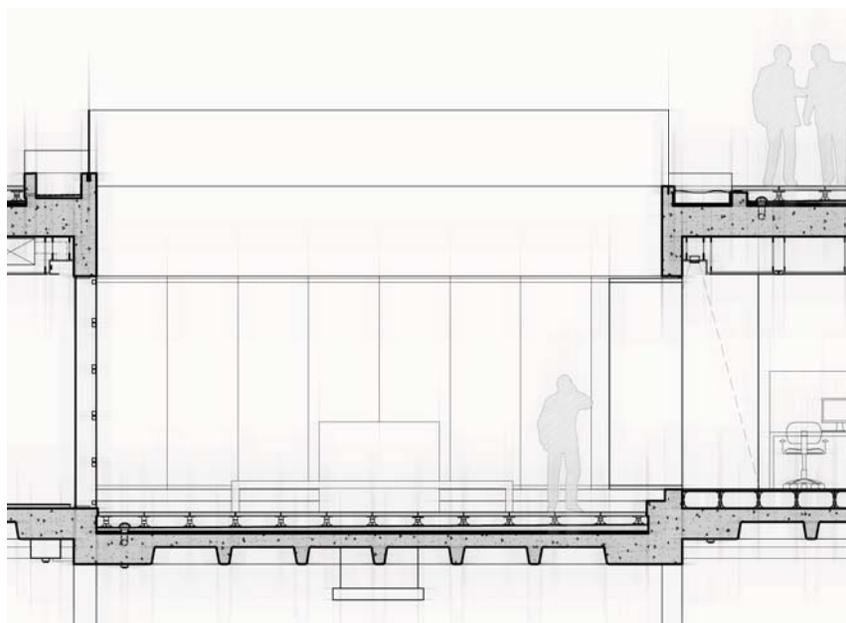


Fig. 126: Courtyard construction and spatial relationship. Scale 1:100 (Author, 2011).

7.3 SERVICES

In order to manage and fulfill the functional requirements of the programme, various methods and systems have to be employed. These systems include thermal comfort and climate control, circulation, lighting, water and waste management and ventilation.

7.3.1 THERMAL COMFORT

Due to the stereotomic character of the structure, it has a very high thermal mass (Green building council of Australia, 2005: 40). The thermal mass provided by the reinforced concrete construction is utilised to regulate the internal thermal conditions of the museum and parking basement.

The heavy mass of the roof construction is able to absorb direct and indirect solar radiation in the summer and retain it for a sufficient amount of time before reradiating it to the interior spaces. The stored heat only reaches the interior of the building at night time, ensuring a cool building by day and a warmer building by night. A mechanical ventilation strategy is implemented where the interior is ventilated to get rid of excessive heat during the summer evenings. During winter, the spaces will not be ventilated at night, in order to retain the reradiated heat. Additional insulation is provided by the raised floor construction of the square by means of the inherent air gap and other conventional insulation materials.

With the building being earth sheltered, the temperature fluctuations of the building mass is also tempered and kept constant. Ground temperatures below 500mm are extremely stable, even if external temperatures fluctuate greatly (Green building council of Australia, 2005: 41).

7.3.1.1 SOLAR CONTROL

As discussed, the thermal mass of the building keeps the ambient temperatures of the internal spaces very comfortable. Throughout the structure there are however various glazing elements that compromise the effectiveness of the thermal massing. These elements take the form of skylights as well as floor to ceiling glazed walls in the courtyard spaces.

The glazing used for the construction of the skylights is a high-performance thermal glazing known as Sunergy®. This glazing has the best thermal performance in its class with a 52% reduction on the solar heat gain when compared to regular float glass (National Glass, 2008: 2).

The skylights will be a double-glazed composite construction which greatly improves the insulating qualities of the

unit. To maximise natural daylighting and minimise reflection (without significant loss in insulation and solar heat gain), Sunergy® Neutral glazing is used. The outer leaf of the glazing will be finished with a transparent non-slip coating seeing as they will be located within a highly trafficable area.

To aid in the diffusion of light and to emphasise their linearity, the skylight cavities are fitted with white pigmented glass reinforced concrete fins.

The glazed walls found in the courtyard spaces also pose a challenge in terms of solar control. In order to manage solar exposure on these walls, a solar screen structure is implemented on the exterior of the glazing. This screen sufficiently reduces solar heat gain on the western and eastern facing walls, whilst retaining a visual connection with the exterior.

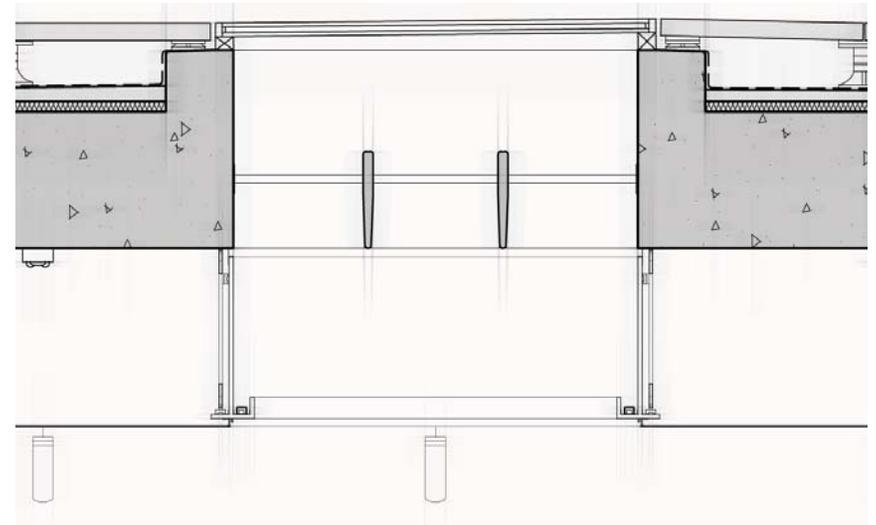


Fig. 128: Skylight detailing and construction. Scale 1:25 (Author, 2011).

7.3.2 VENTILATION

7.3.2.1 MUSEUM BUILDING

Because the museum development is entirely located underground, it makes it impractical to naturally ventilate the museum building itself. The building is entirely reliant on mechanical ventilation as well as mechanical heating and cooling. Fresh air is taken in from the exterior of the square. Vertical air-inlets were not feasible within the design, so air is taken in from the surface of the square. These inlets are integrated with seating elements that border the formal section of the public space and will be fitted with the necessary filters to accommodate for the surface air intake. The exhaust air is extracted to the basement parking structure from where it is allowed to escape to the surface.

Air handling and HVAC within the museum building, is dealt with by means of two plant rooms. The plant rooms are strategically placed in order to serve the two wings of the museum respectively.

7.3.2.2 PARKING STRUCTURE

The parking structure is also located completely underground which makes the ventilation of this structure equally challenging. On two walls of the basement (the sides bordering Visagie and Minnaar Streets) the floor slabs are pulled away from the retaining walls to allow for a 1000mm opening stretching over the three floors to the exterior. The openings allow for natural light to enter the cavernous spaces as well as for the movement of air in, through and out of the structure.

The circulation of air within the basement is aided by mechanical ventilation which also relies on fresh air intake from the square. The air intake is done on the same principle as discussed earlier. A centralised plant room is located within the basement in order to handle the distribution of fresh air to the lower floors.

Assisting with the ventilation of the ambient air, is a specialised centrifugal induction fan system. This system allows for a ductless installation that is low in maintenance and very durable, resulting in a more cost-effective operation. Supply and exhaust inlets and fans can also be considerably smaller due to the elimination of air resistance caused by conventional ducting (IAD, 2008). In case of fire, the system also has excellent smoke extraction capabilities and can withstand temperatures of up to 300. The exhaust fans are located within the cavity of the retaining wall construction and allows stale air to be expelled at street level.

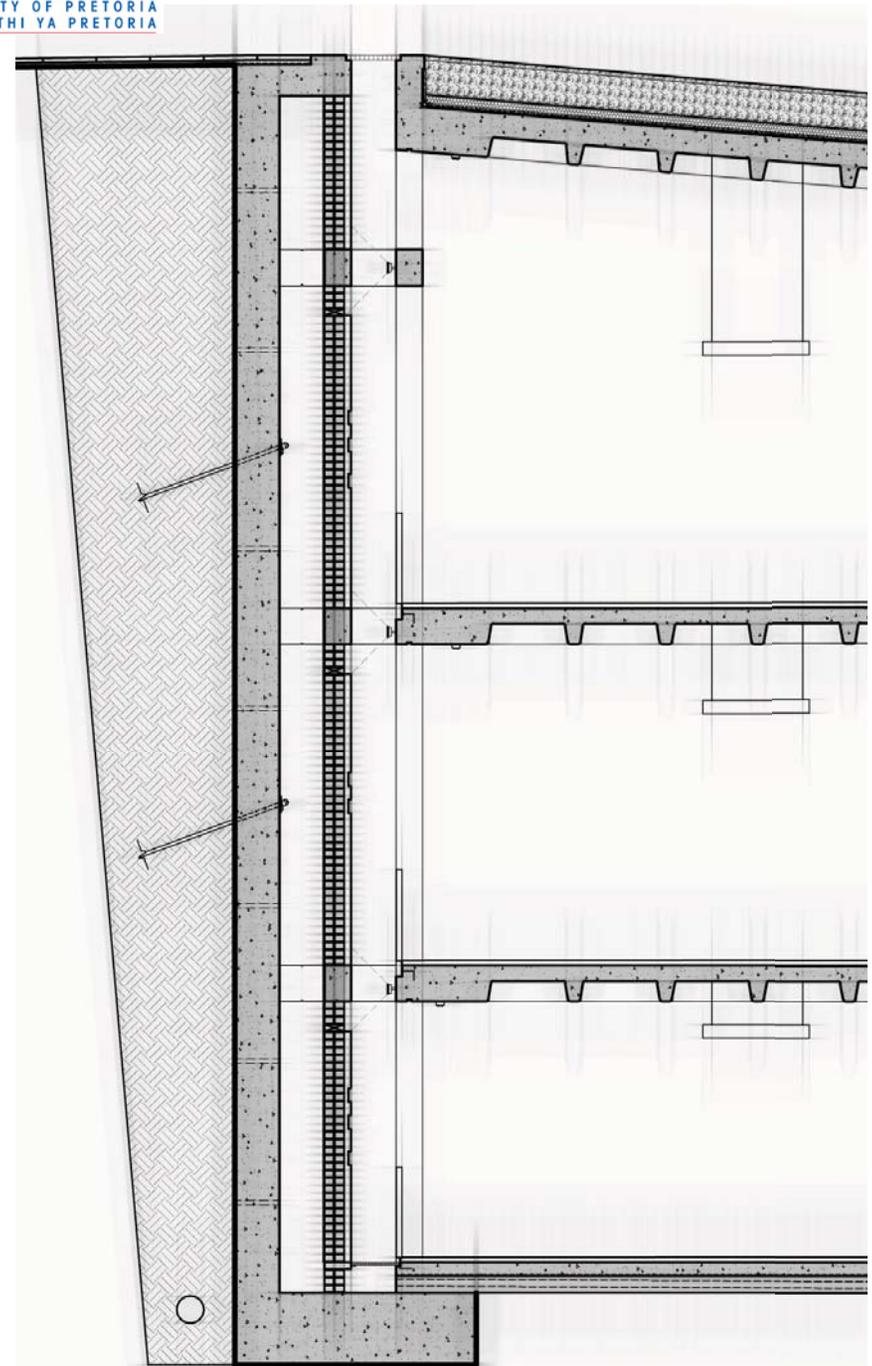


Fig. 129: Basement retaining wall construction and articulation. Scale 1:100 (Author, 2011).

7.3.3 CIRCULATION

Because of the variation in programme, the movement of people differs greatly depending upon the reason for visiting or using the facility.

The everyday commuter travelling along Paul Kruger street will pass the museum building seemingly unnoticed. Only upon crossing the axis between the City Hall and the Museum of Natural History, will the entrance to the museum present itself. The individual can then enter the building or simply continue on their journey. Whilst passing Pretorius square they can also make use of the public facilities at anytime.

The everyday user will mainly utilise the public square which has direct axis from all three bordering street edges. The part of the square that borders Paul Kruger street will be the most frequented, as it was designed to offer a platform for the happening of the everyday urban event.

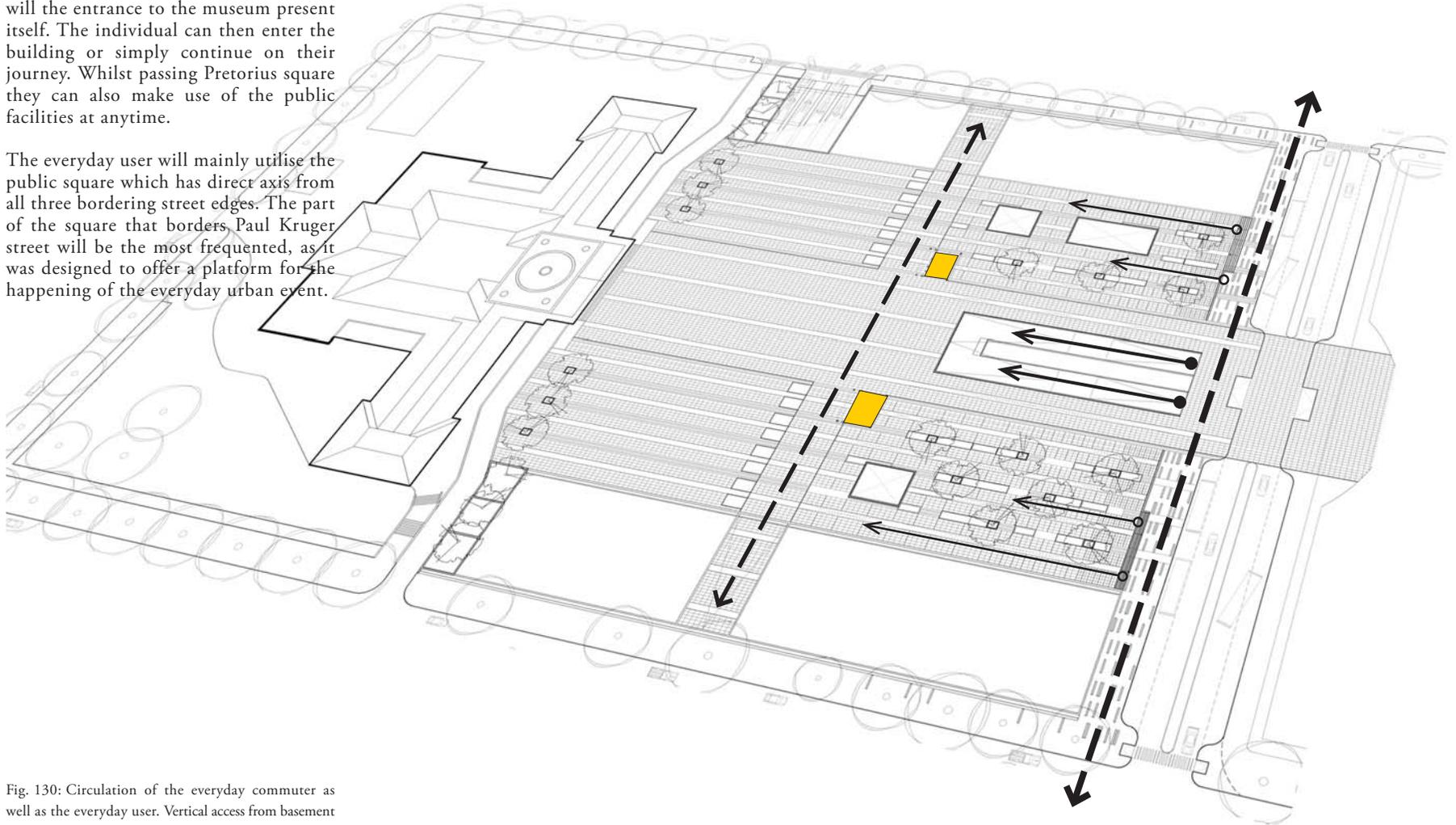


Fig. 130: Circulation of the everyday commuter as well as the everyday user. Vertical access from basement to square in yellow (Author, 2011).

The destination user will have a very different method of circulation compared to either of the two users mentioned above. Upon arrival, the individual will park their car in the underground parking and make their way to the vertical circulation cores (there is no direct access to the museum from the basement parking). Reaching the square, they will be confronted with the presence of City Hall as well as the Museum of Natural History on the Paul Kruger street edge. It is on this edge that they enter the museum building. The ritual of arrival and entering strongly grounds the visitor to context and heightens their awareness of the subterranean nature of the museum intervention.

Entering the museum, the user descends down an entrance ramp and offered glimpses into the interiority of the space as the museum is gradually exposed. Once inside the museum, it becomes evident that the main route of circulation encircles the entrance ramp, offering the user a degree of familiarity and orientation. By having the main circulation route relating to the ceremonial axis predominant on the site, the user is also grounded in space. Branching off from the main circulation loop, are secondary routes with selective pause-spaces to be found along the way.

Access to the lower subterranean floor is gained by means of an additional ramp that also branches off from the circulation ring. On the lower ground floor, individual access to the three galleries is gained from a circulation spine. Once within these galleries, free movement is possible between them without having to return to the main circulation.

The exclusive use of circulation ramps within the design was a conscious decision, as it allows for a greater awareness of the individual's movement through space and time and also ensures complete inclusivity and appropriation by all users.

The articulation of threshold and the emphasis on transition, becomes an intrinsic part of the user experience and the overall spatiality of the museum and the precinct as a whole.



Fig. 131: First subterranean floor. Circulation spine with secondary routes. Vertical access from basement to square in yellow (Author, 2011).



Fig. 132: Second subterranean floor. Circulation ramp with secondary routes. Vertical access from basement to square in yellow (Author, 2011).

7.3.4 LIGHTING

The lighting systems in the facility is of utmost importance. Natural light is utilised where possible, but because of the cavernous museum spaces, artificial lighting will be necessary throughout.

When working with artificial light, there are two key elements to keep in consideration. Firstly, the colour rendering index (CRI) of the lamps and secondly the colour temperature (CT). For general lighting and tasks, a CRI of between 70 and 90 is desirable. In the case of gallery spaces, where the correct reproduction of colour and texture is pivotal, a CRI of 90+ is necessary (Krüger, 2011).

Throughout the design, different variation of white light will be used. Both warm white (CT = 2800K) and cool white (CT = 4000K) lamps will be employed depending on the space and the desired effect. Together with the colour temperature, the effects of diffused, direct and indirect lighting was also be investigated.

To keep the environmental impact to a minimum, commercial LED and CFL lamps will be used throughout. Where there is a need for exceptional colour rendering however, halogen incandescent lamps or high-end LED or CFL lamps will be used (Krüger, 2011).

Because of the complex and highly specialised nature of architectural lighting installations, the expertise of a lighting design company is of utmost importance.

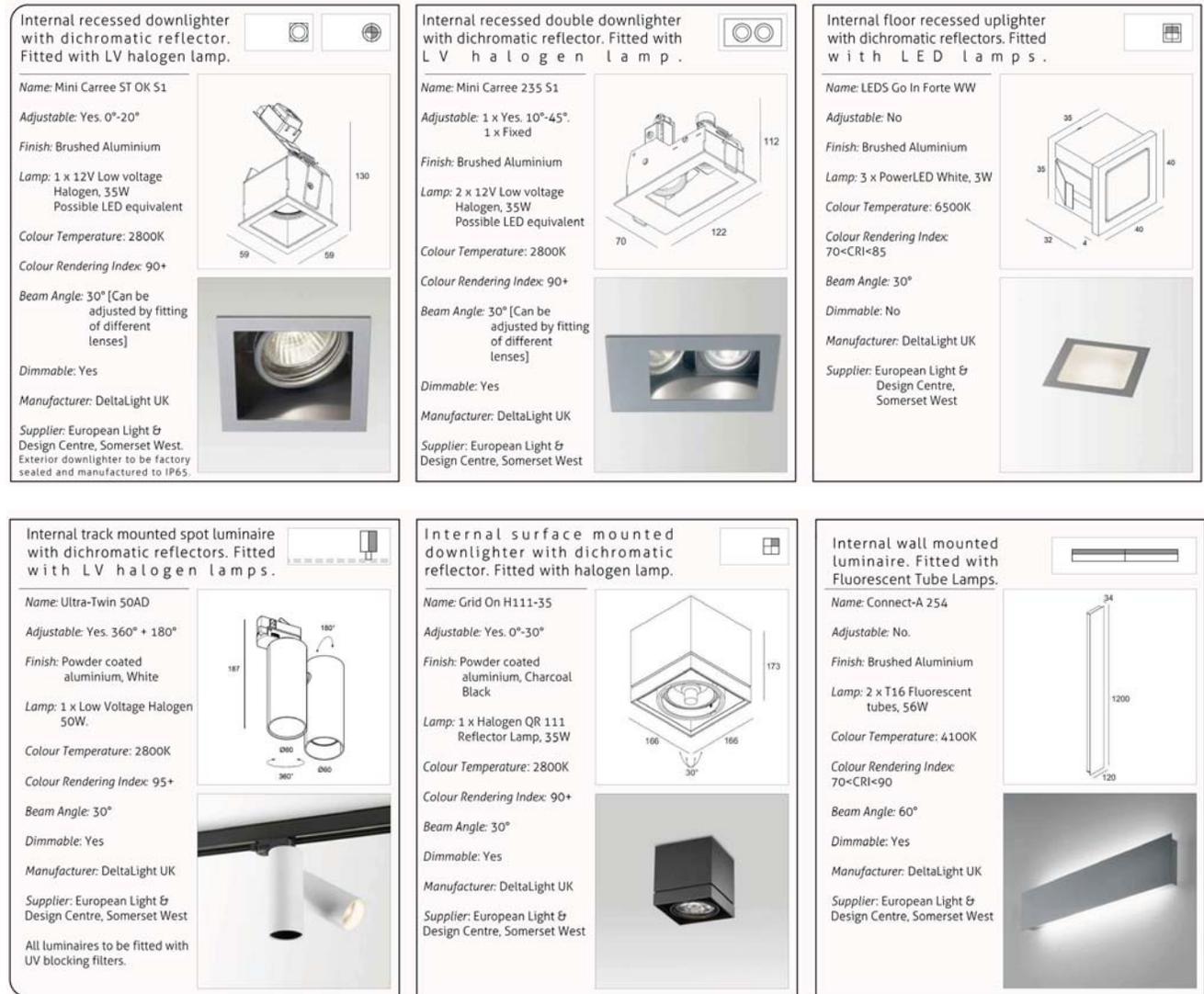


Fig. 133: Exploration of possible luminaires to be incorporated into the design (Author, 2011).

7.3.5 WATER MANAGEMENT

The water management of the proposal proved challenging due to the subterranean nature of the project.

7.3.5.1 BASEMENT CONSTRUCTION

It was decided to employ a cavity construction for the basement structure. This approach was chosen due to the various advantages it offers over a tanked basement construction (Wegelin, 2006: 1.33). Cavity construction allows for the ingress of groundwater through the retaining wall by keeping the ferrule holes exposed and unblocked. Groundwater is then drained into sumps from where it is pumped to the municipal stormwater connection.

7.3.5.2 RAINWATER MANAGEMENT

The majority of the landscaping on the redesigned square is comprised of hard surfaces which makes stormwater management very important. The raised floor construction of the square allows for water to seep through the granite tiles by means of the 5mm jointing gaps that are incorporated into the layout.

Once the rainwater enters the floor cavity it is dealt with in the conventional manner. Rainwater outlets are cast into the concrete roof construction which allow the water to drain from the square into the municipal stormwater system.

Where the municipal connection is higher than the points of drainage, the rainwater is drained into the basement sumps from where it is then pumped to the stormwater connection. The various planters on the square also drain into this floor/roof cavity.

Where it is not possible for rainwater to drain into the raised flooring of the square, stormwater catchment channels

are utilised. Stormwater channels are also integrated into the vehicle ramps in order to minimise rainwater accumulation in the basement.

7.3.5.3 SEWAGE MANAGEMENT

The sewage management of the museum proved challenging due to the design of the building. Because the structure is positioned below ground, it makes it difficult to directly dispose of the sewage via the municipal connection. A sewage holding tank system, where the waste is temporarily stored on site, will thus have to be installed.

In order to determine the sizing of the holding tanks required, the amount of waste that is produced will have to be calculated. It has to be mentioned that it is both black and grey water that will be stored on site.

With a holding tank system it is of utmost importance to minimise daily sewage flow. All fittings will thus be water efficient and operated through Infra-Red sensors. WCs will be dual-flush, using a minimum of 3ltrs of water and a maximum of 8ltrs per flush.

If assumed that there are 25 permanent staff members, who each flush the WC a maximum of 4 times during an 8 hour shift, then:

$$25 \times 4 = 100 \text{ flushes per day}$$

The museum can also expect an average of 300 visitors per day:

$$300 \times 1 \text{ flush} = 300 \text{ flushes per day}$$

Taken that the WCs consume a maximum of 8ltrs of water per flush it can be calculated that the facility will produce:

$$(100 + 300) \times 8 \text{ltrs} = 4000 \text{ltrs of black waste water per day}$$

The basins consume 1,9ltrs of water per minute of operation and the average person uses a basin for 15secs.

$$1,9 \text{ltrs} / 4 = 0,5 \text{ltrs per use}$$

If a basins is used every time a WC is flushed then:

$$(100 + 300) \times 0,5 \text{ltrs} = 200 \text{ltrs of grey waste water per day}$$

The total daily sewage flow (DSF) is thus:

$$= 3200 + 200 = 3400 \text{ltrs per day}$$

Assuming that the sewage will be pumped up to the municipal connection every other day, the normal operating volume (NOV) of the museum will be

$$= 3400 \times 2 = 6800 \text{ ltrs}$$

In case of mechanical pump failure there also has to be a reserve storage volume (RSV) of three times that of the NOV (Department of Health, 2007):

$$= 6800 \times 3 = 20\ 400 \text{ ltrs.}$$

The sizing of the sewage holding tanks are then determined based on the total liquid volume capacity:

$$= \text{NOV} + \text{RSV} \\ 3400 + 20\ 400 \\ 23\ 800 \text{ltrs}$$

The total volume necessary for the successful operation of the system is:

$$23\ 800 \text{ltrs} = 23,8 \text{ m}^3 \\ = 24 \text{ m}^3$$

To accommodate the required volume, 4 interconnected 6m³ polyethylene sewage storage tanks will be installed. The tanks will be fitted with dual grinder + ejection pumps as well as a sewer force main to be connected to the municipal sewage line.

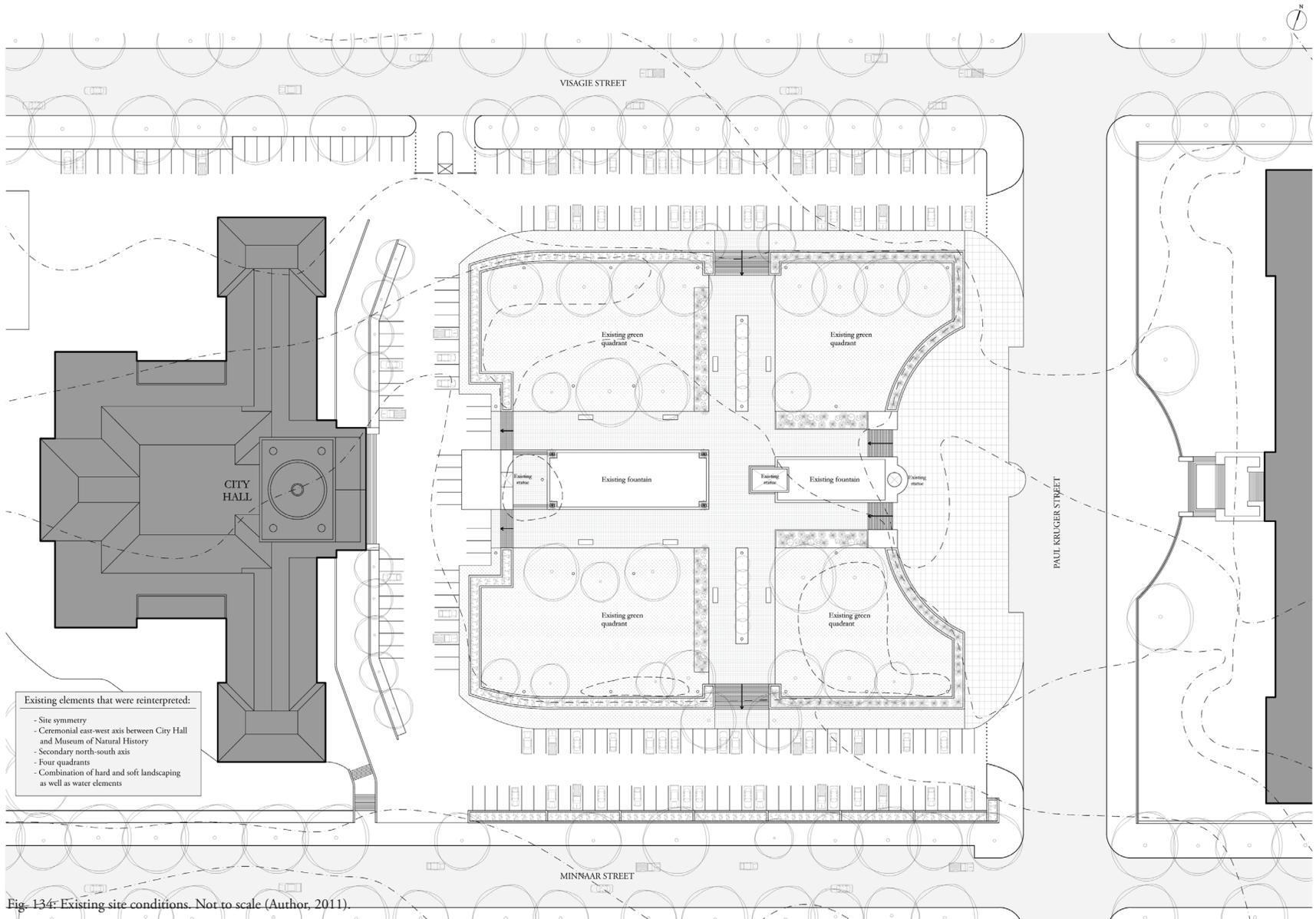
Drawings

8

8

DRAWINGS

This chapter contains the drawings that were presented in the November Final Exam. The same set of drawings were presented for both the design and technical examination panels.



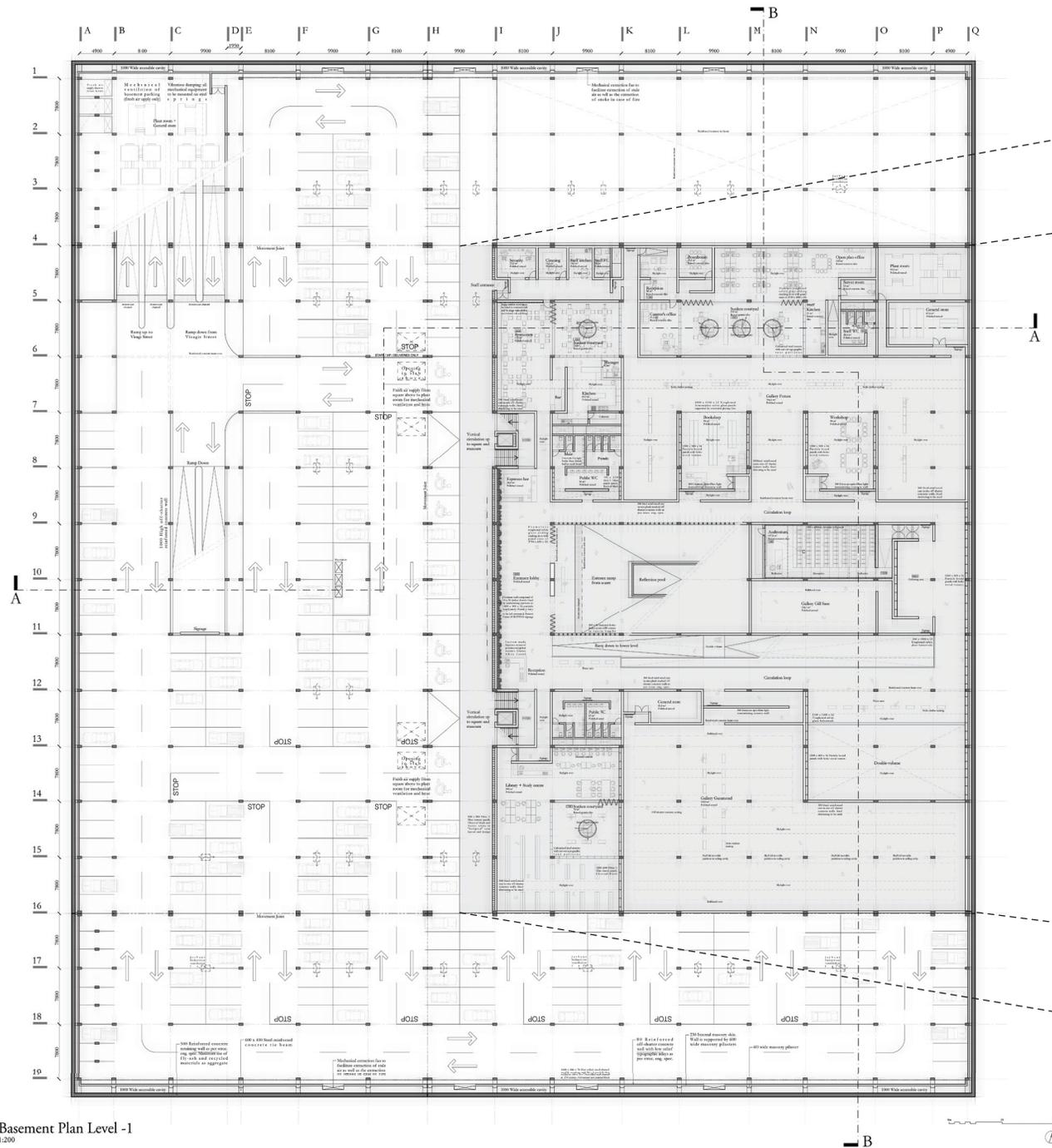


Fig. 136: First subterranean floor of proposed new precinct . Not to scale (Author, 2011).

Basement Plan Level -1
1:200

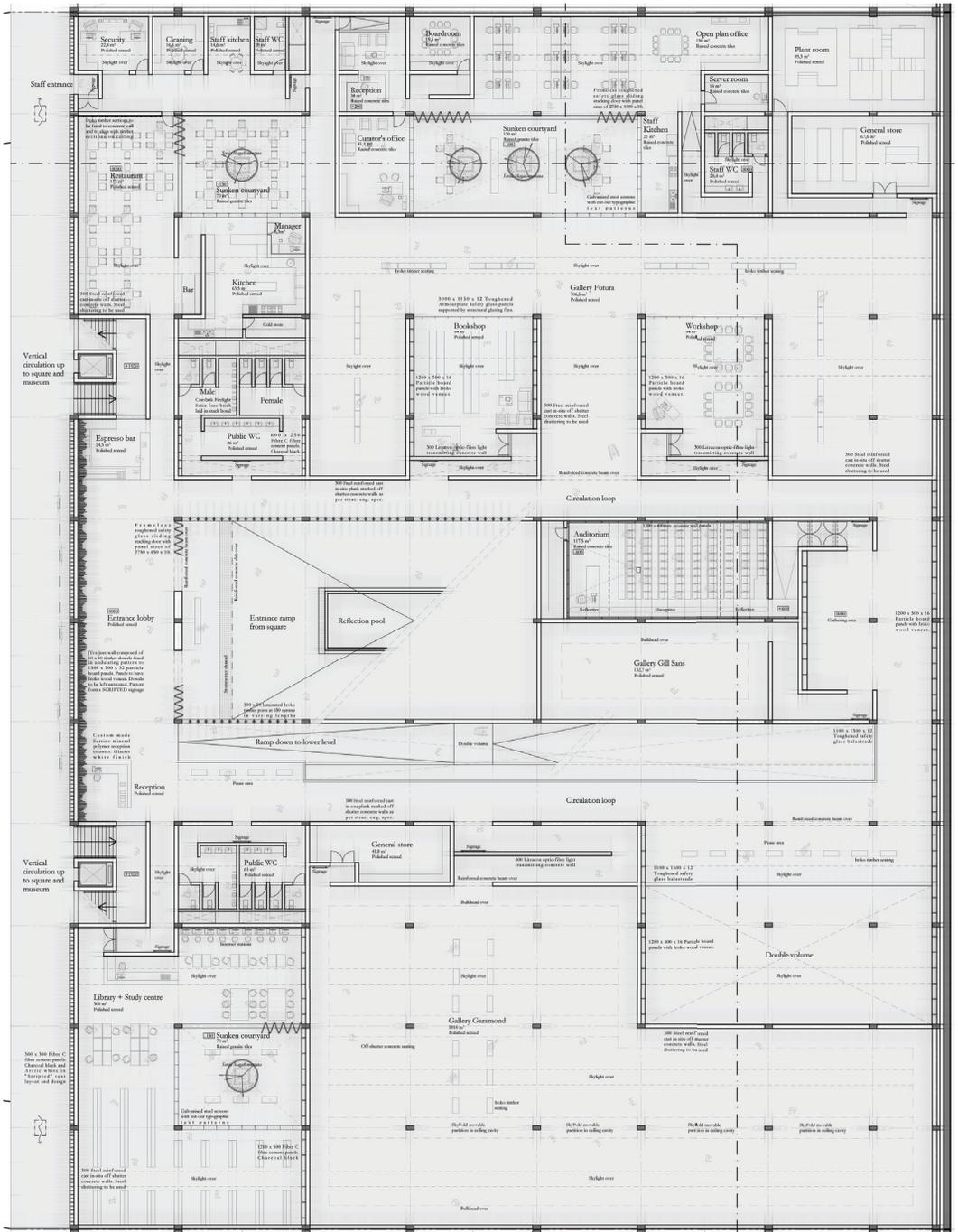


Fig. 137: Callout of museum plan - first subterranean floor. Not to scale (Author, 2011).

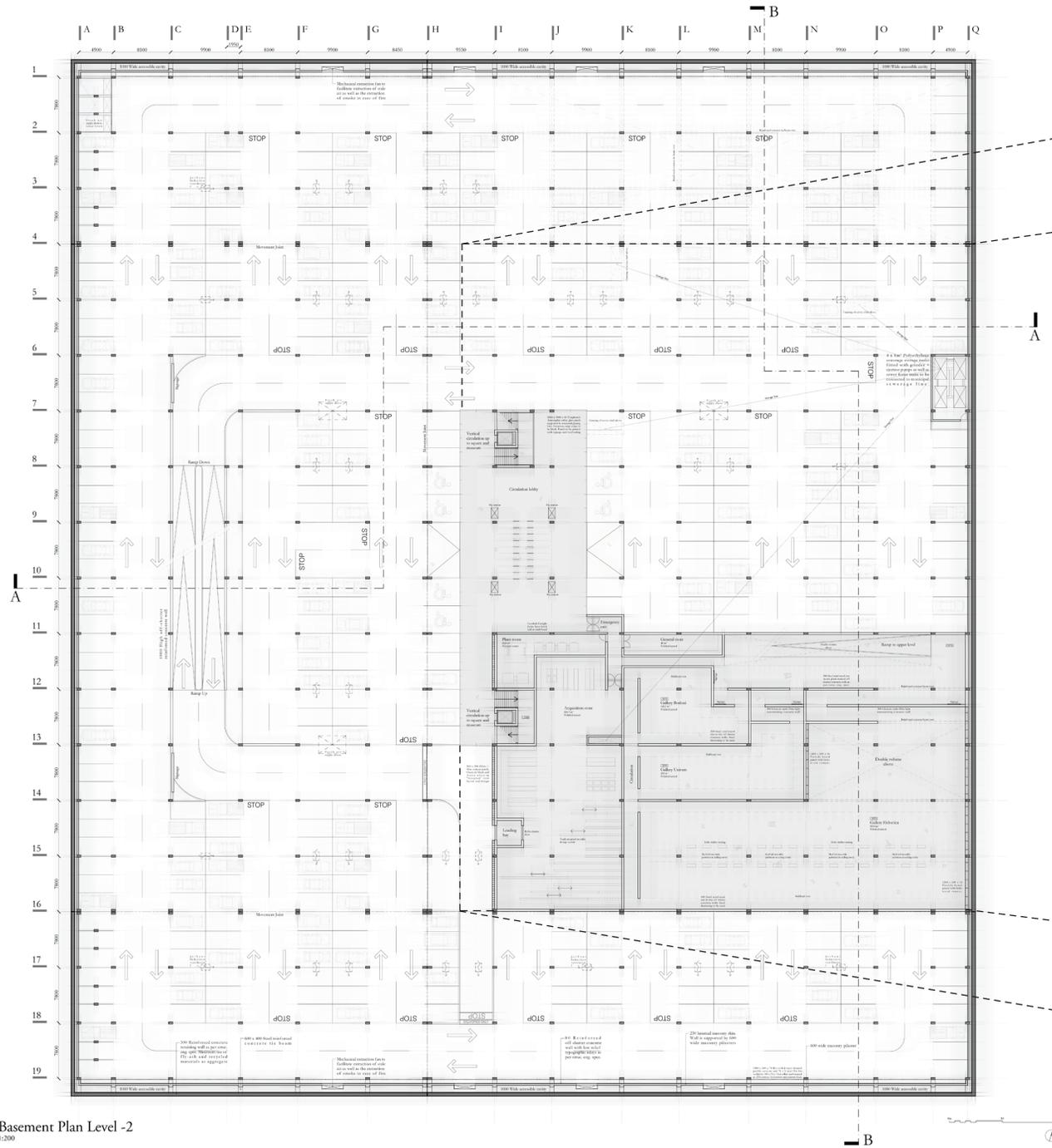


Fig. 138: Second subterranean floor of proposed new precinct . Not to scale (Author, 2011).

Basement Plan Level -2
1:200

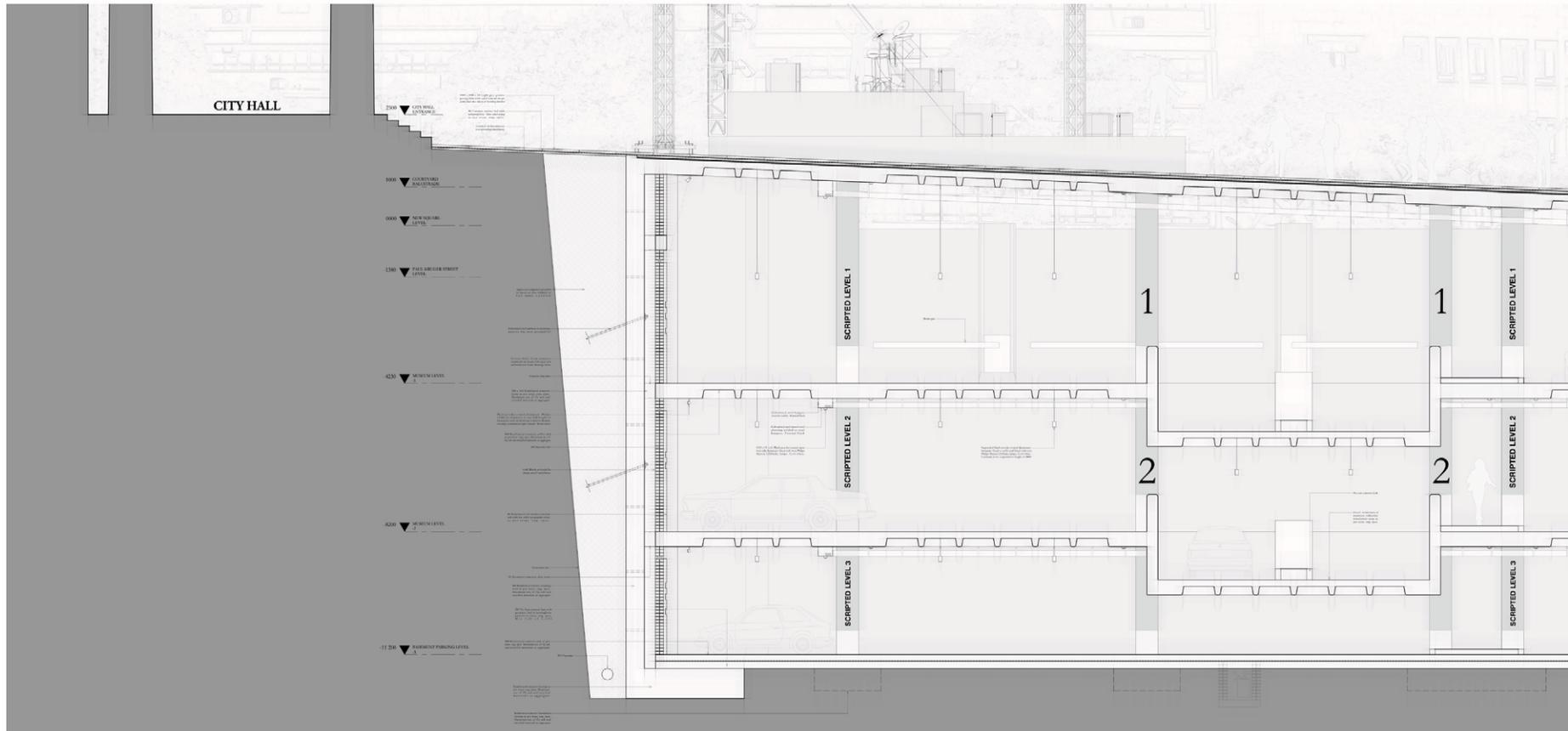
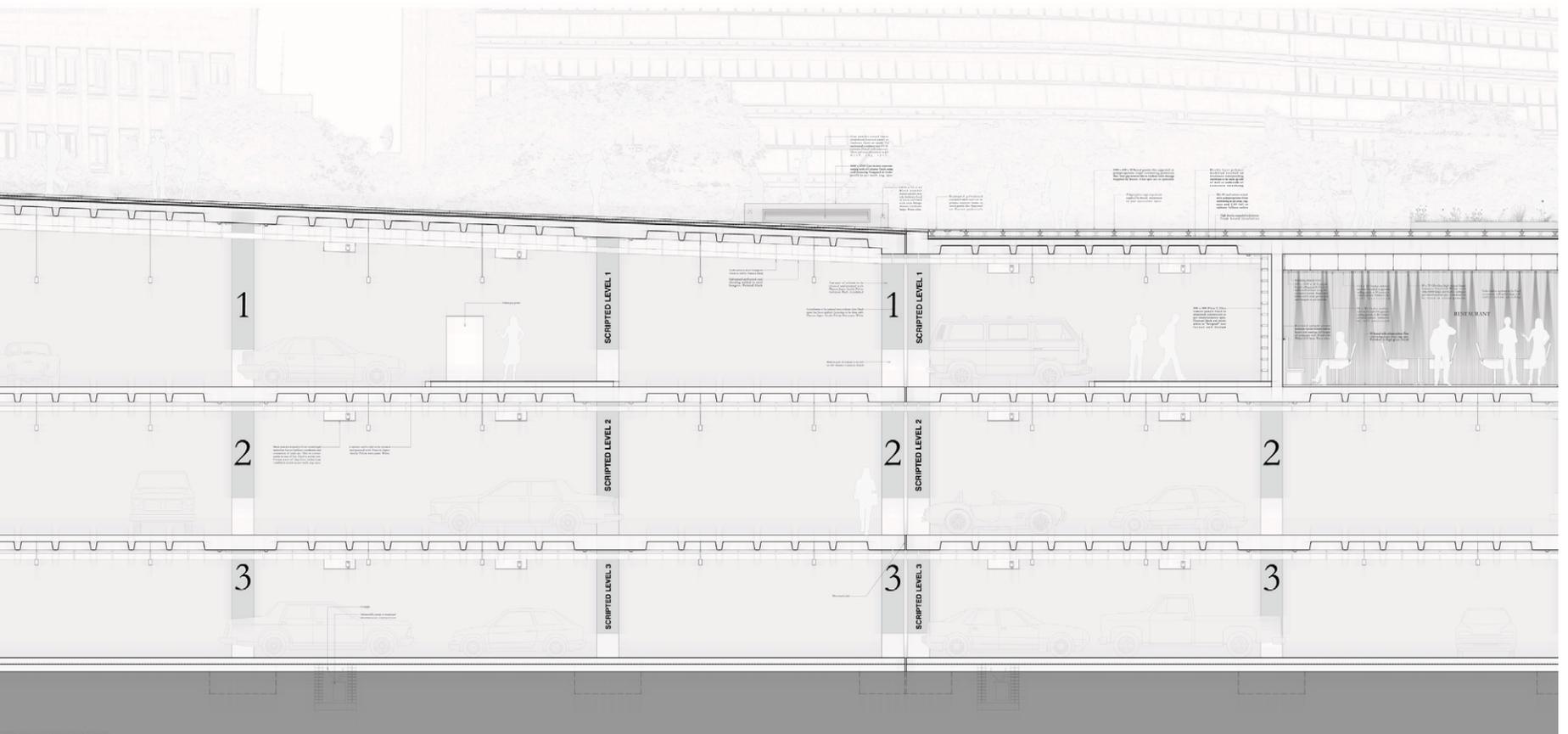


Fig. 140: Section AA - Part 1. Not to scale (Author, 2011).



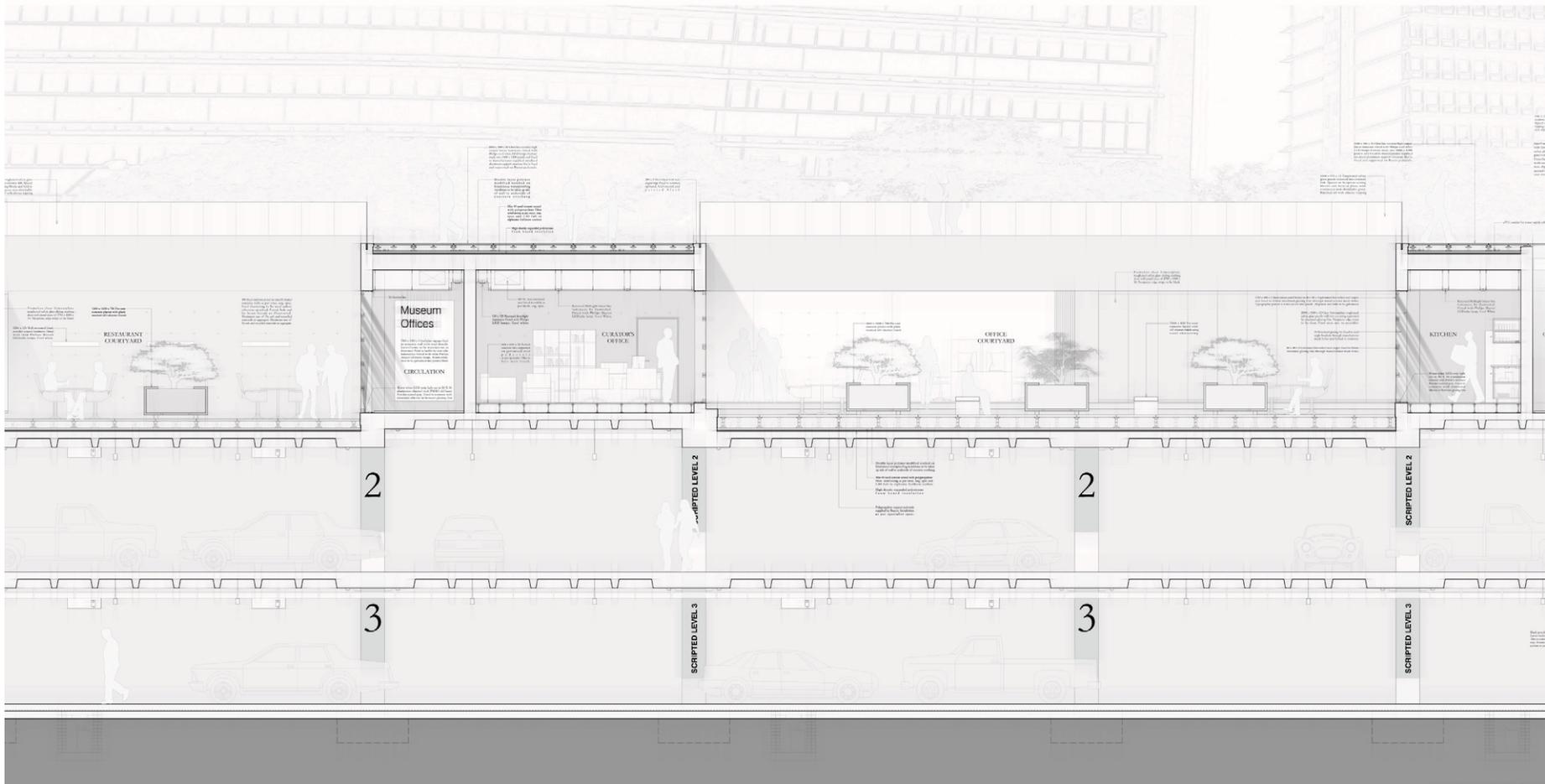
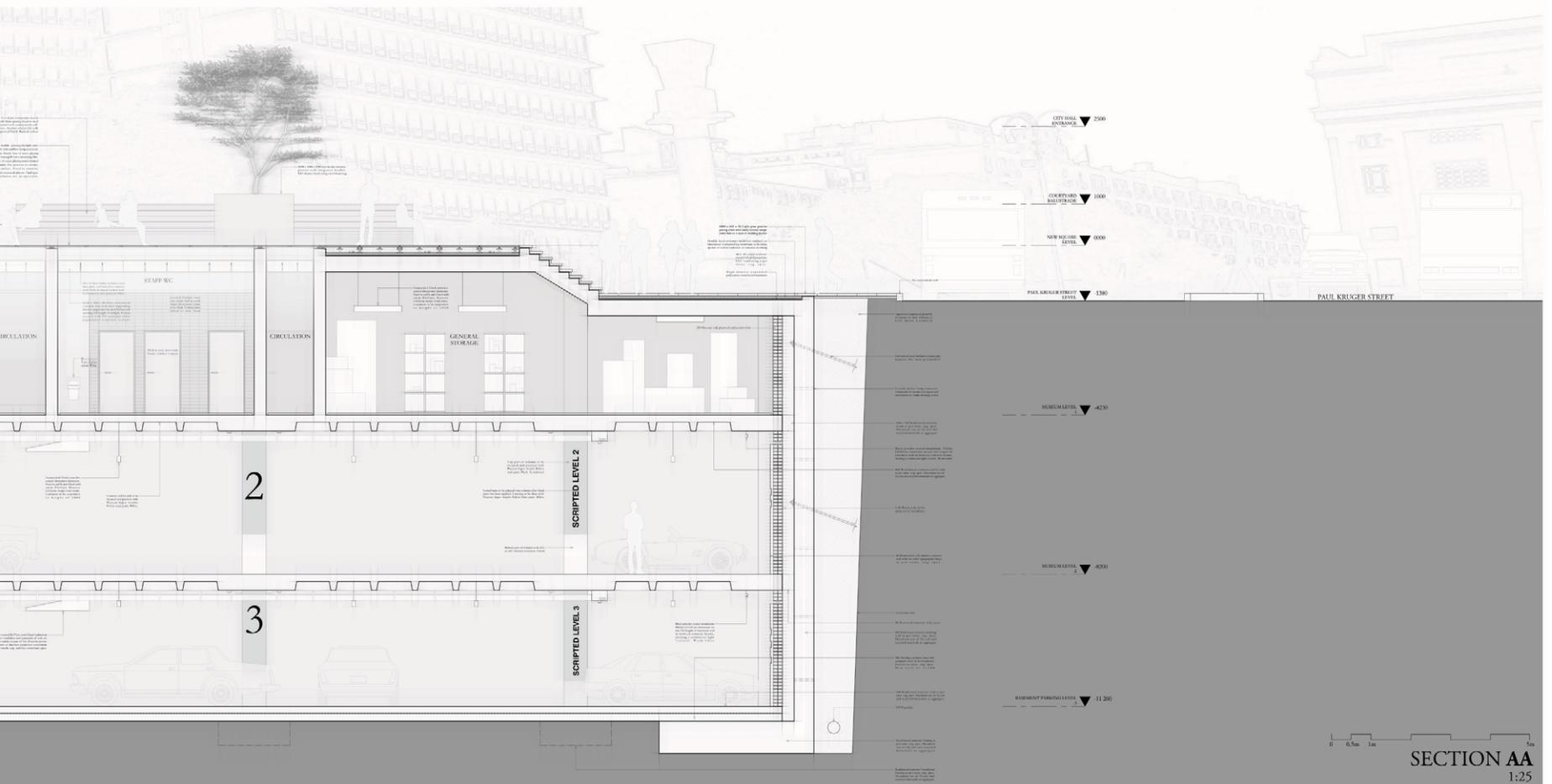


Fig. 141: Section AA - Part 2. Not to scale (Author, 2011).



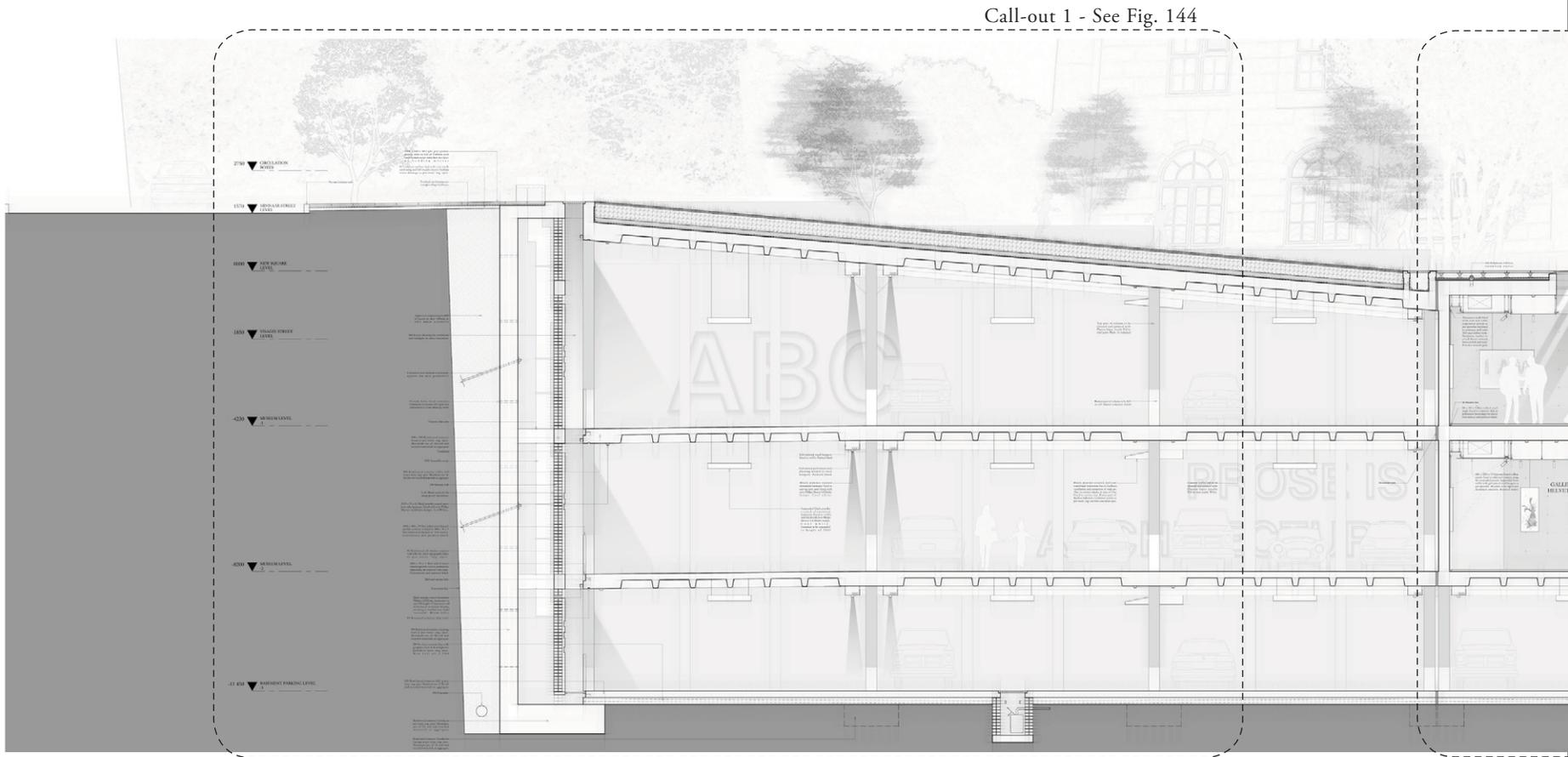
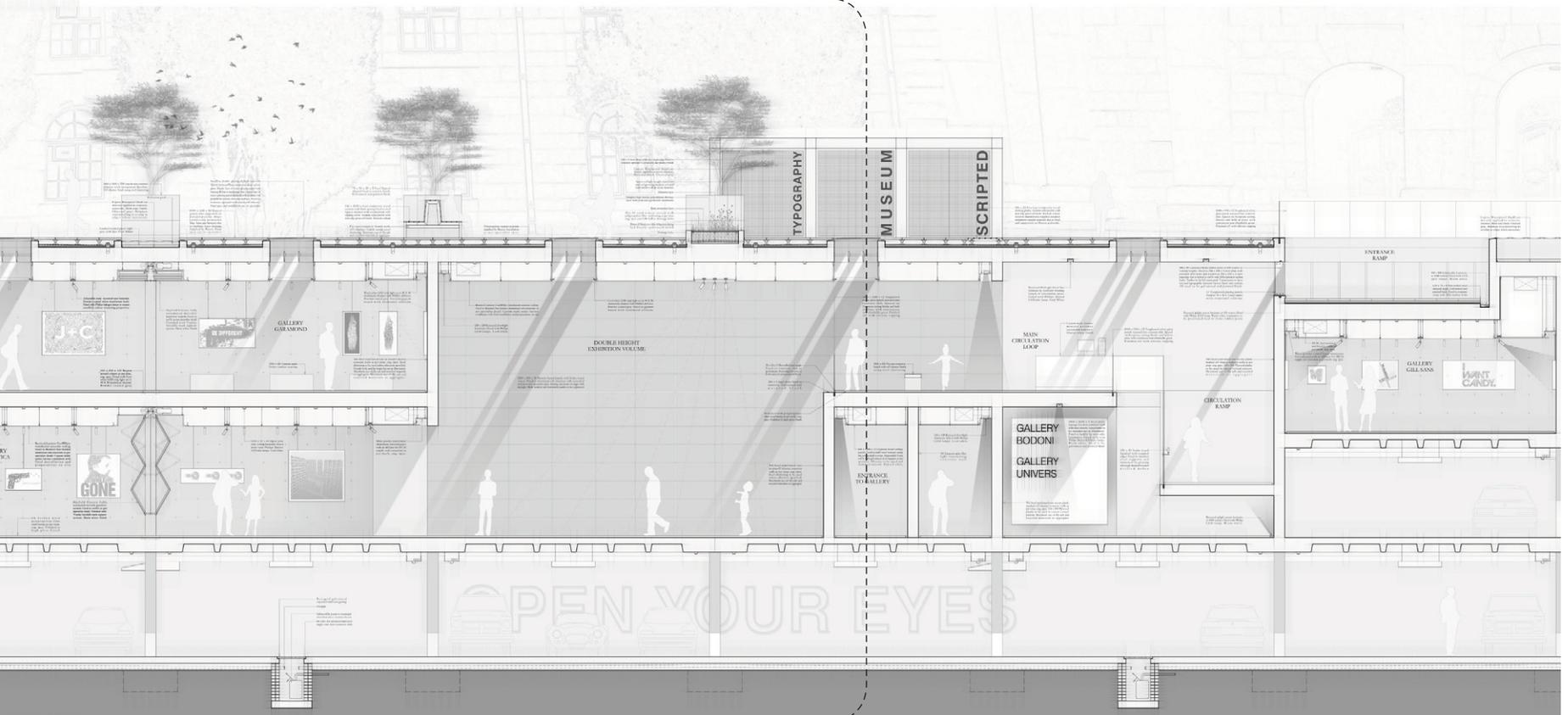


Fig. 142: Section BB - Part 1. Not to scale (Author, 2011).

Call-out 2 - See Fig. 145



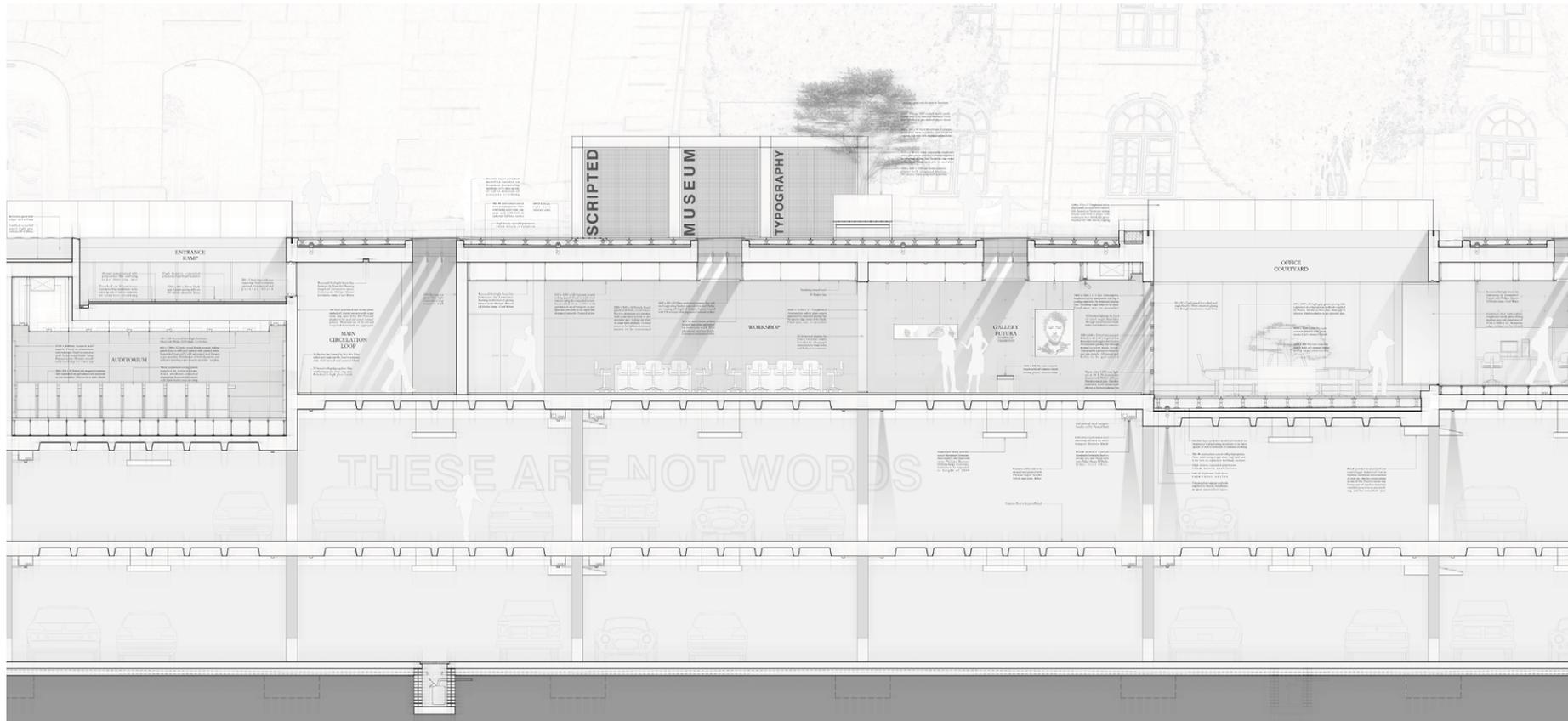
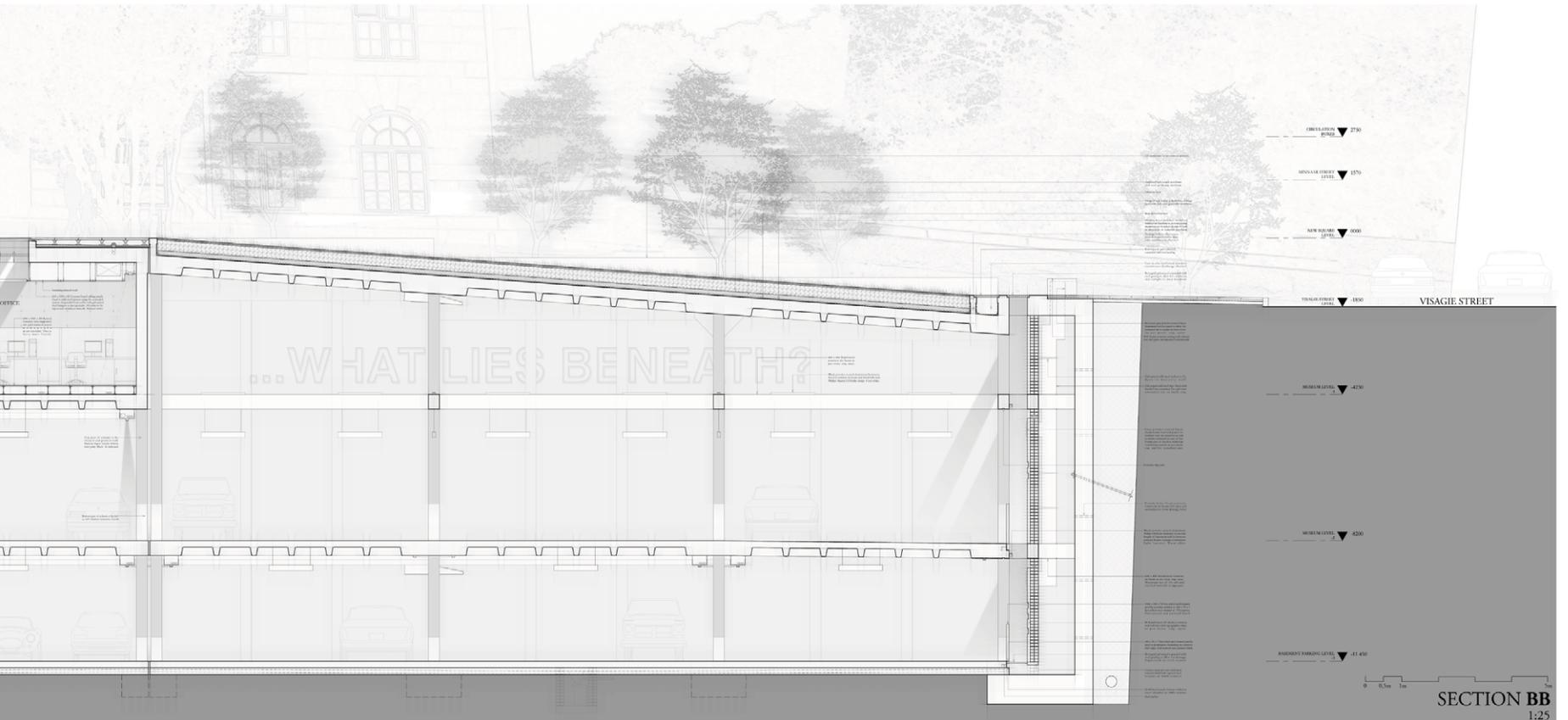


Fig. 143: Section BB - Part 2. Not to scale (Author, 2011).



SECTION BB
1:25

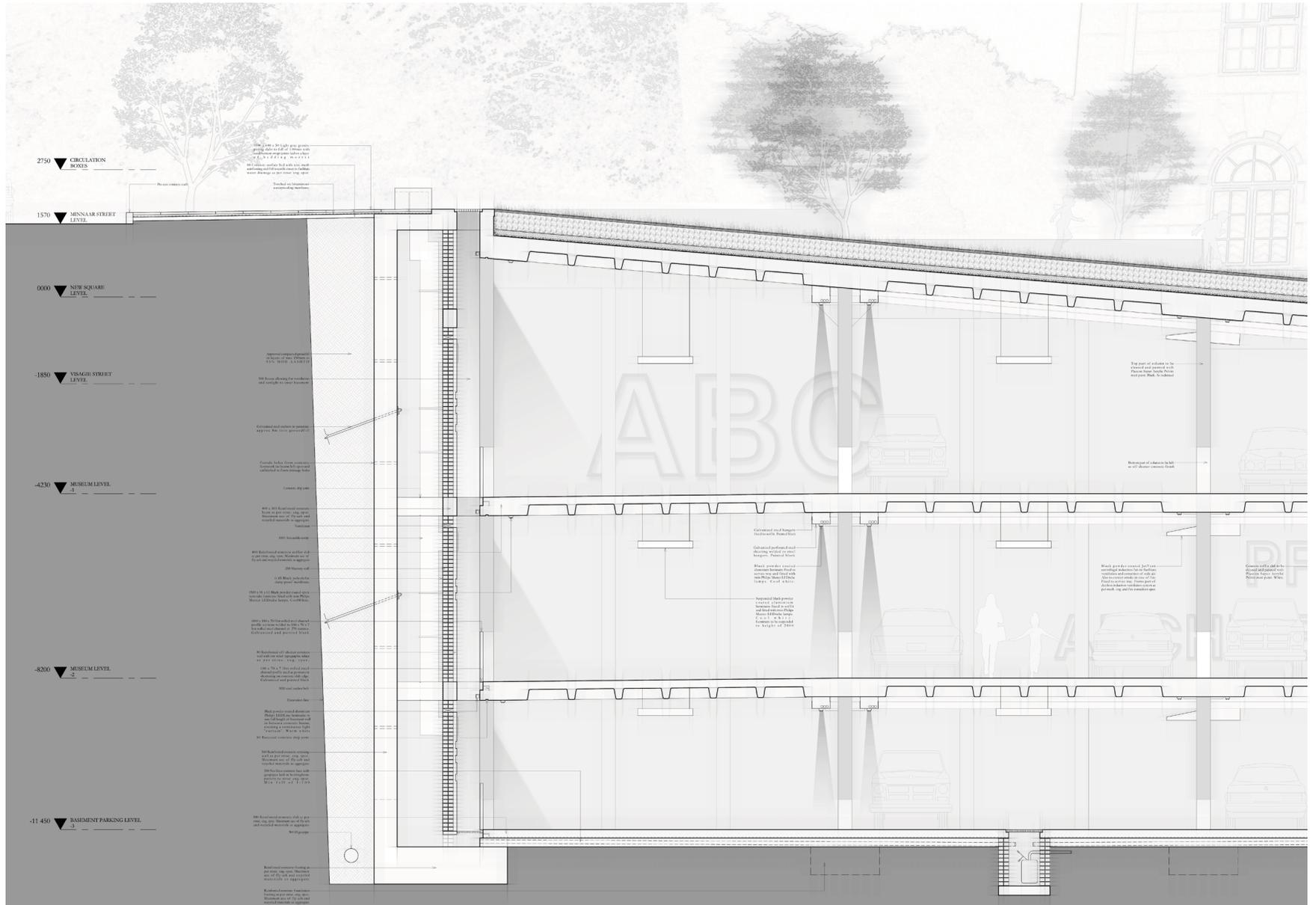


Fig. 144: Section BB - Call-out 1. Not to scale (Author, 2011).

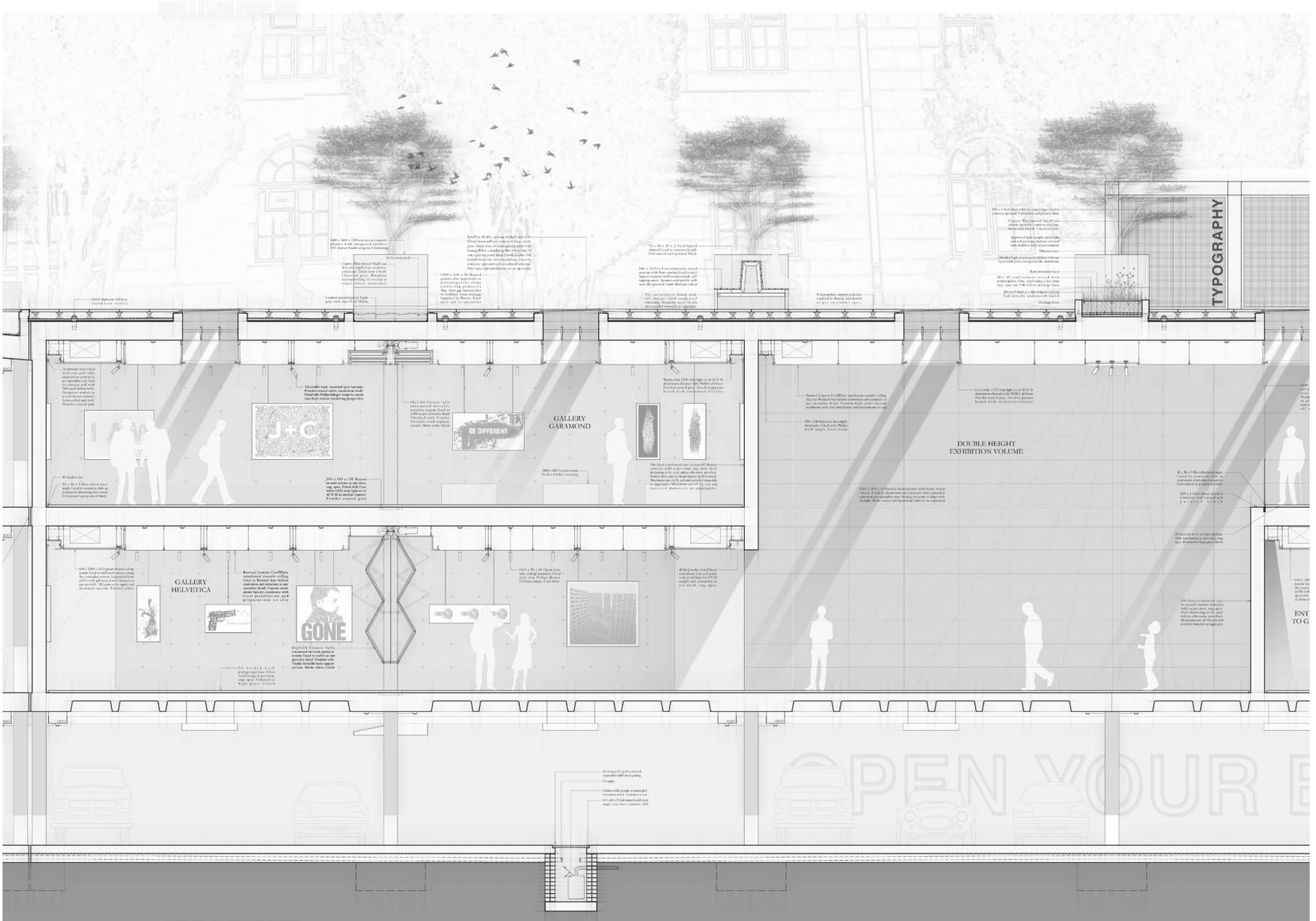


Fig. 145: Section BB - Call-out 2. Not to scale (Author, 2011).



Fig. 146: View of museum entrance ramp - daytime (Author, 2011).

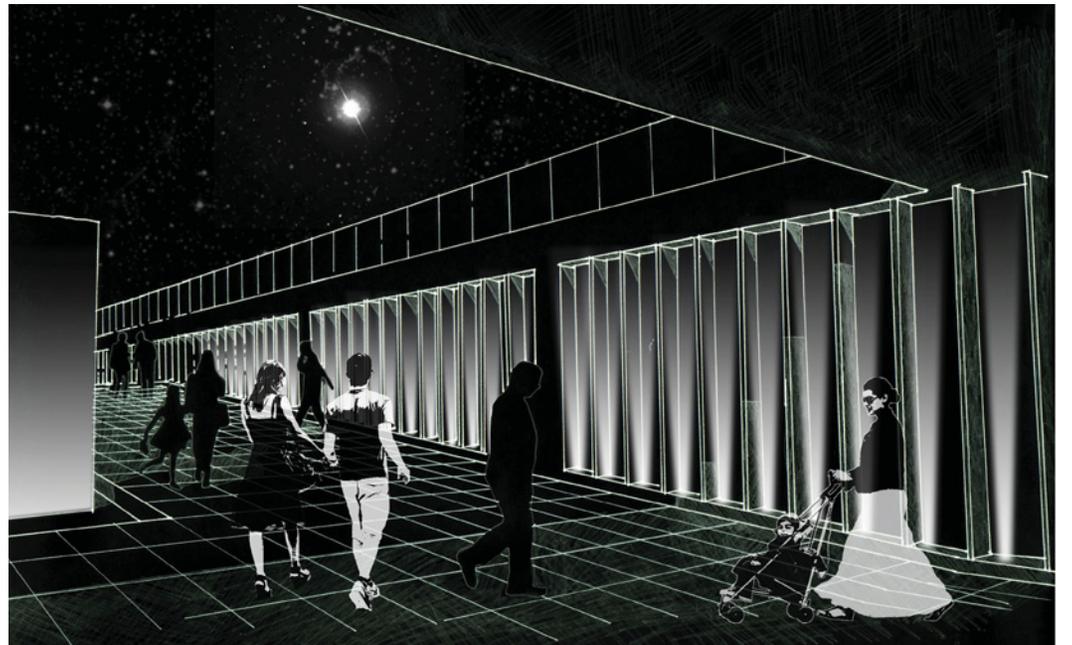


Fig. 147: View of museum entrance ramp - nighttime (Author, 2011).

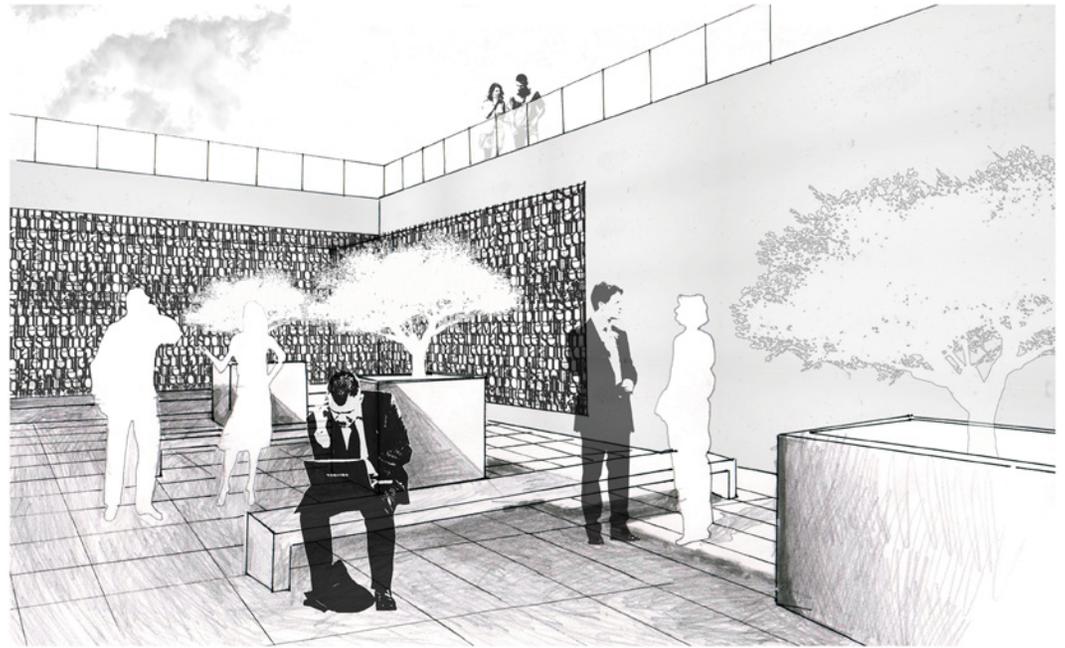


Fig. 148: View of sunken museum courtyards with perforated letter screens (Author, 2011).

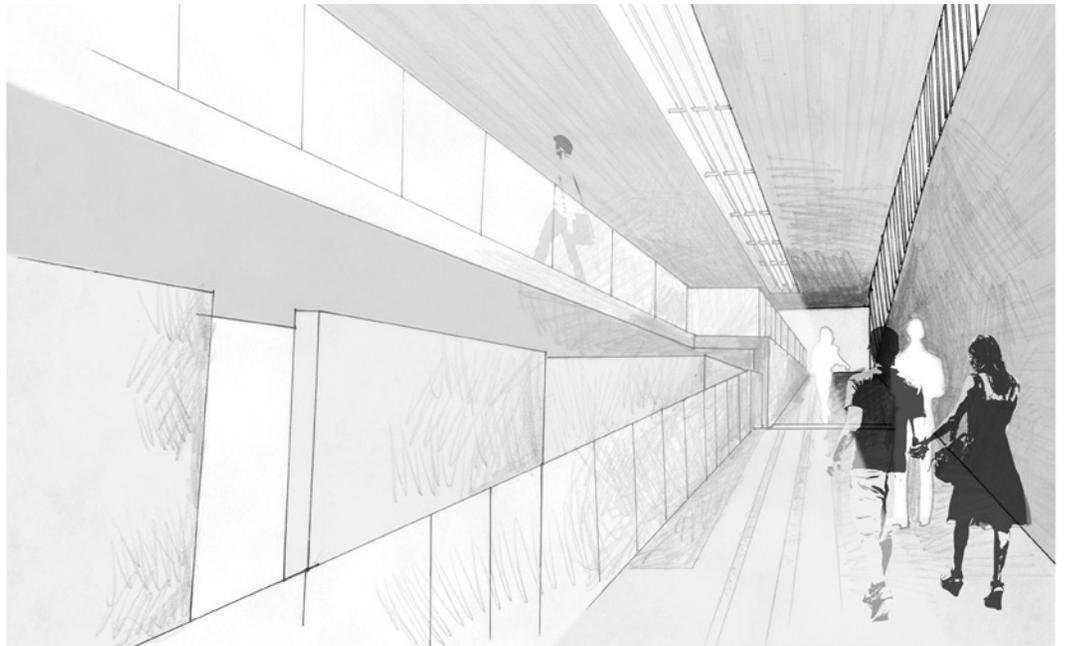


Fig. 149: View of interior circulation ramp (Author, 2011).

Conclusion

9

CONCLUSION

This dissertation attempted to question the validity of current museum typologies within the context of Pretoria. It is the opinion of the author that there is a need for a museum re-think and that museum space should be approached as a complex and multi-faceted architectural and urban construct.

Through the design of the new architectural intervention the author aimed to illustrate the important role that public space plays in the construction of museum space and how it can greatly contribute to its incorporation into the realm of the everyday.

The design of the museum was approached from a highly contextual stance and intended to demonstrate that an architectural end-product is greatly enriched by grounding a design within its context.

By placing emphasis on threshold and the in-between, the author also attempted to highlight the importance of transitioning between spaces. The ritual of entering and the physical space of the in-between were treated as intrinsic architectural and design elements.

The proposed design endeavoured to propagate the possibility of integrating typography, architecture and public space. In order to do this successfully however, museums need to become true public spaces and in turn catalyse and facilitate the production of meaningful and memorable urban public spaces external to themselves – they need to at once, be and create usable place.

Addenda

10

10.1 Addendum A Typography

10.1.1 THE ANATOMY OF A TYPEFACE

Fig. 150: The anatomy of a typeface (Author, 2011. Sourced: Ambrose & Harris, 2005; 26-27; Lupton, 2004: 34).



Apex

The point formed at the top of a character such as 'A' where the left and the right strokes meet.



Arm, bar or crossbar

A horizontal stroke that is open at one or both ends, as seen on 'T' and 'F' as well as on the upstroke on the 'Y' and the 'K'.



Ascenders and descenders

An ascender is the part of the letter that extends above the x-height; a descender falls below the baseline.



Counter

The empty space inside the body stroke, and is surrounded by the bowl.



Cross stroke

A horizontal stroke that intersects the central stem.



Crossbar

A horizontal stroke on the 'A' and 'H'. A crossbar joins two stems together.



Ligature

A crossbar or arm that extends across a pair of letters in order to join them.



Link

A stroke that joins two other letter parts, such as the bowls of a double-storey 'g'.



Serif

The small stroke at the end of a main vertical or horizontal stroke.



Stress

The direction in which a curved stroke changes weight.



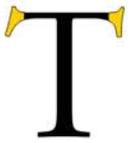
Swash

An elongated curved entry or exit stroke.



Tail

The descending stroke on a 'Q', 'K' and 'R'. The descenders on 'g', 'j', 'p', 'q' and 'y' may also be called tails as can the loop of the 'g'.



Beak
The serif form at the end of an arm.



Bowl
The part of the character that encloses a space in circular letter forms. Can be open or closed.



Bracket
The curved portion of a serif that connects it to the stem.



Chin
The angled terminal part of the 'G'.



Crotch
The inner point at which two angled strokes meet.



Ear
A small stroke extending from the right side of the bowl of the 'g' or protruding from the stem of the 'f' and 'r'.



Finial
An ornamental terminal stroke at the top of characters like the 'a' and 'f'.



Leg
The lower, downward sloping stroke of the 'K', 'k' and 'R'. Sometimes used for the tail of a 'Q'.



Shoulder
The curved stroke leading into the leg of an 'h' or 'n'.



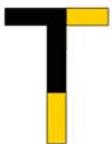
Spine
The left-to-right curving stroke in the 'S' and 's'.



Spur
The terminal to a stem of a rounded letter.



Stem
The main diagonal or vertical stroke of a letter.



Terminal
The end of a stroke, which may take several forms such as rounded, acute, convex, concave and flared.



Vertex
The angle formed at the bottom of a letter where the left and right strokes meet.

10.1.2 BRUCE MAU'S TYPE MANIFESTO

Fig. 151: A new manifesto for typography (Redrawn by Author, 2011. Source: Bruce Mau in Lupton, 2004: 32-33).

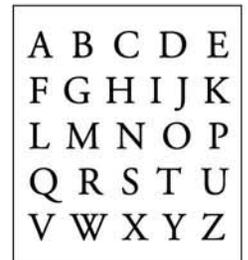
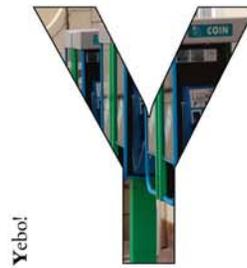
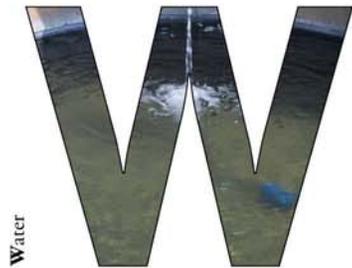
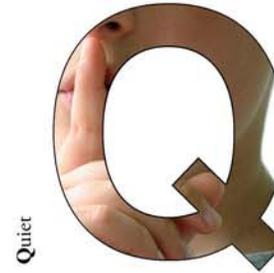
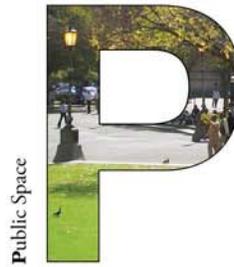
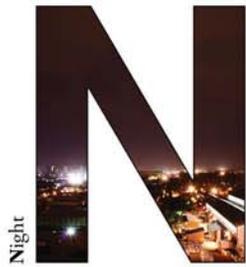
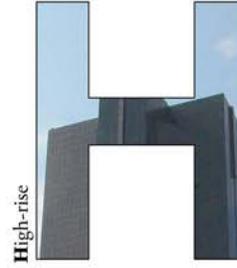
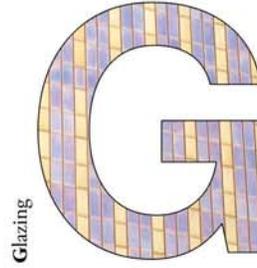
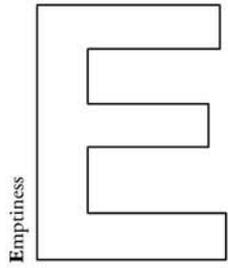
1. A **font** that asks more questions than it answers.
2. A **font** that has projective memory that reminds you to remember.
3. A **font** with a limited lifespan.
4. A **font** with an expiry date.
5. A **font** that's gone bad.
6. A **font** without temporal inflection, without the imprint of its time.
7. An apolitical font, a **font** that doesn't care.
8. A **font** unaffected by the force of gravity and the weight of human history.
9. A **font** without family, without ancestry.
10. A Marshall McLuhan **font** that stubbornly persists in bidding farewell to itself.
11. A **font** that takes advantage of all that promised "processing power".
12. A **font** that does something other than sit on its ass in a digital museum.
13. A **font** with the capacity to breed with other fonts.
14. A recombinant **font** - every letterform the unruly child of a predictable but random process.
15. A **font** that sounds as good as it looks.
16. A **font** that writes its own script.
17. A **font** that thickens the plot.
18. A **font** that responds and reacts to the meaning it carries and conveys.
19. A **font** that assumes the intelligence of its reader.
20. A **font** that might sense your level of agitation, fear or aggression.
21. A **font** prone to sudden outbursts and tantrums.
22. A **font** that exceeds the typographic genome.
23. A **font** whose parents are Father Time and the Mother of Invention.
24. An ambient **font**, a font without qualities.
25. An everyday **font**, a font of common-sense.

26. A **font** that slows the pace of reading for the difficult passages (and skips along through easy bits).
 27. A **font** that writes between the lines.
 28. A **font** that refuses to utter imperatives or commands.
 29. A karaoke **font**, a lip-syncing font, a font without a voice of its own.
 30. A **font** that listens while it speaks.
 31. A **font** that toggles effortlessly between languages.
 32. A **font** for speaking in tongues.
 33. A **font** that speaks in dialects.
 34. A metropolitan **font** for uptown, the ghetto, and suburbia alike .
 35. A **font** that simultaneously translates.
 36. A **font** that sings the plaintive songs of lonely whales.
 37. A **font** that grows.
 38. A **font** that learns.
 39. An evolutionary **font**.
 40. An entropic **font**.
 41. A “live” **font**.
 42. A promiscuous **font**, a font that fucks fonts, a font-fucking-font.
 43. A **font** that emerges, unfolds, performs, evolves and passes away.
 44. A **font** of youth.
 45. Twin **fonts**, identical but unique
 46. A generative **font** that renders itself according to behavioral tendencies.
 47. A **font** that is something other than a recording.
 48. A **font** that is different every time you “play” it
 49. A **font** with the metabolism of a fly.
 50. A **font** with a demographic algorithm that projects itself onto you, the average reader.

10.1.3 PRETORIA AN ALPHABET

Fig. 152: An alphabet of Pretoria (Author, 2011).





10.2 Addendum B Mapping

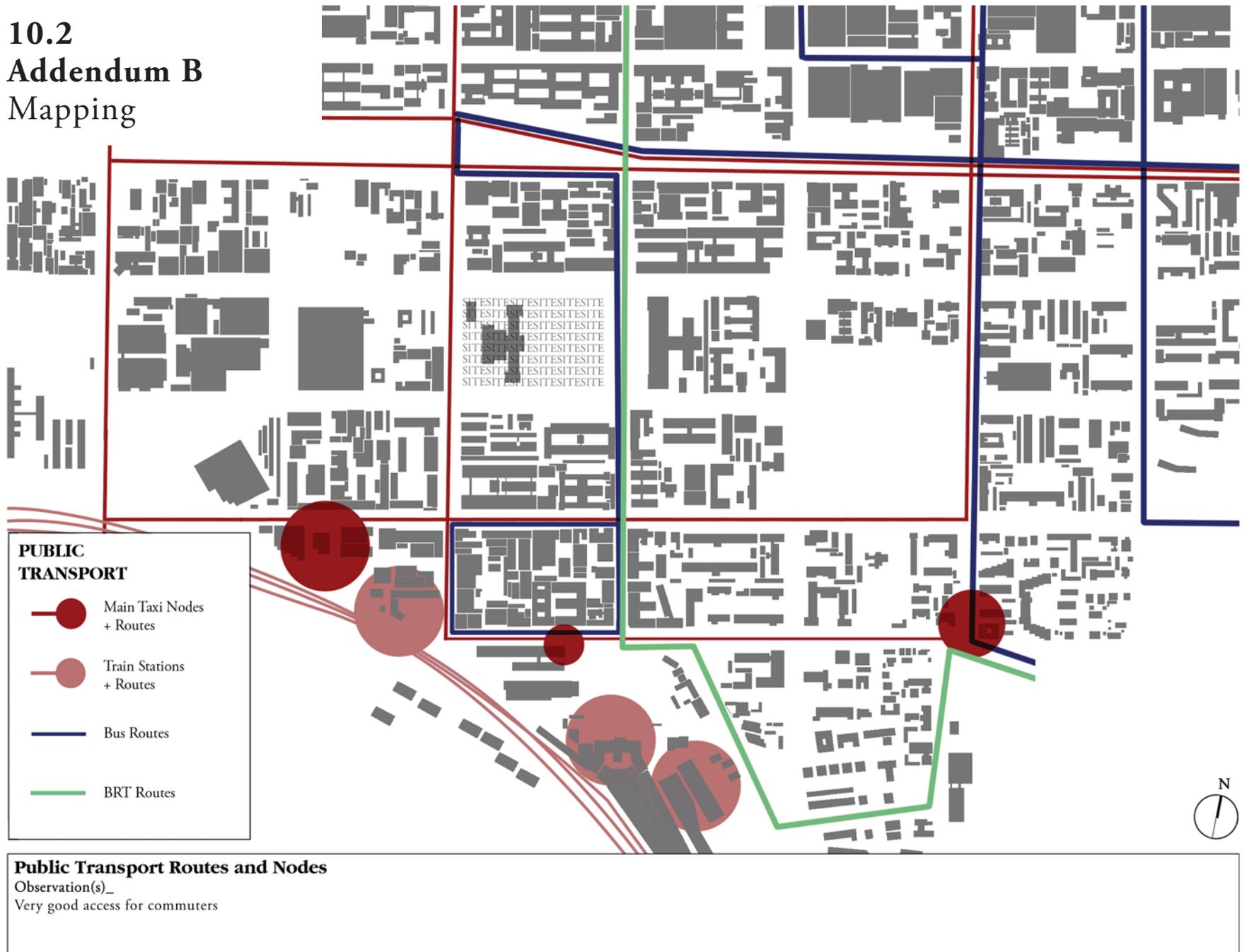


Fig. 153: Mapping - Illustrating public transport routes within study area (Author, 2011).



Fig. 154: Mapping - Illustrating Gautrain bus routes within study area (Author, 2011).

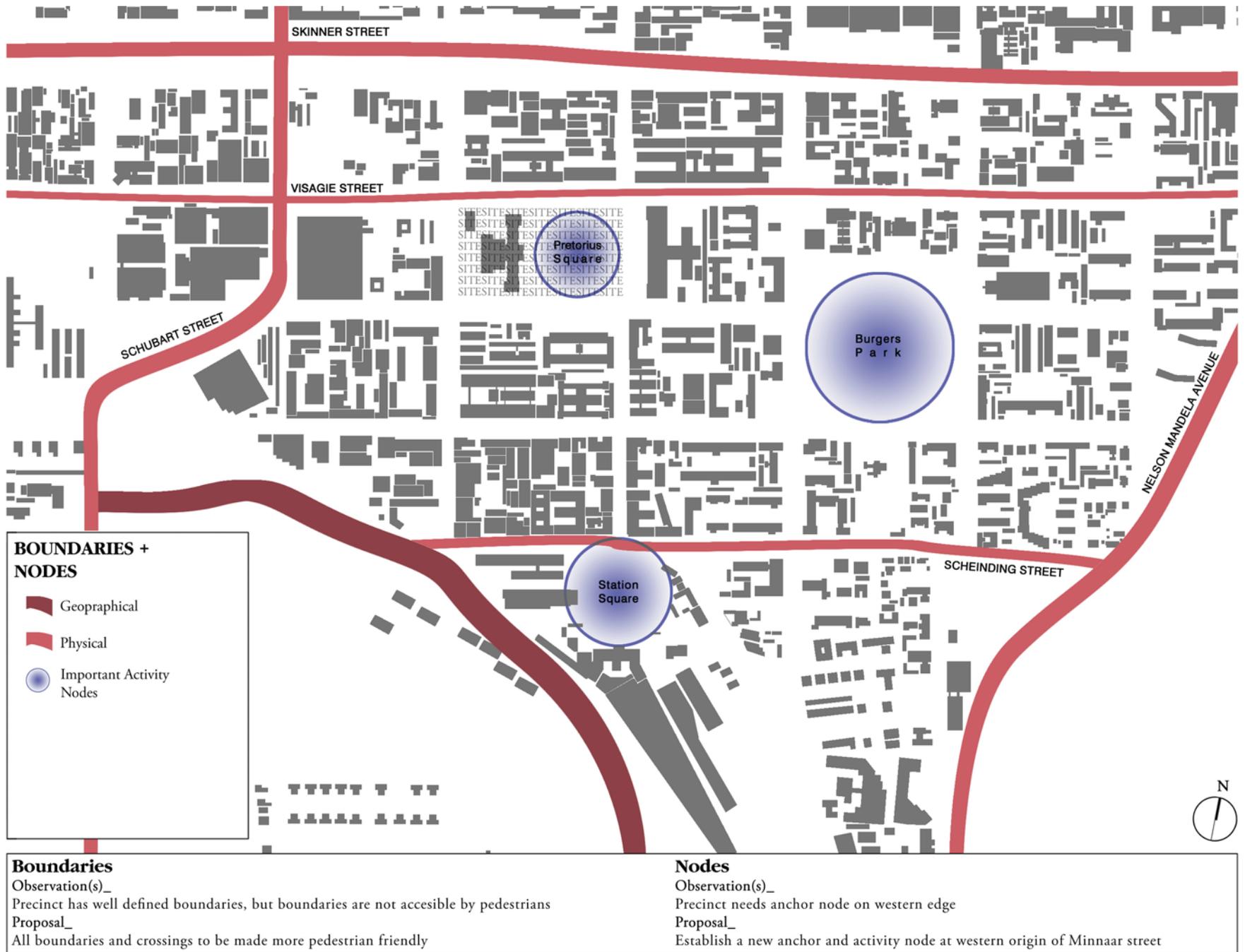


Fig. 155: Mapping - Illustrating boundaries and nodes within study area (Author, 2011).



EDGES + ACCESS:

Barrier:

- non-permeable
- permeable

Accessibility:

- non-accessible (3 steps and more)
- accessible (2 steps or less)

Edges + Access

Observation(s)_
Fences and not buildings articulate edges. Most public spaces are controlled by access gates and fences. Precinct is not very inclusive.

Proposal_
Removal of fences and boundaries. Introduction of universal access into buildings. Revisit sidewalk, pavement and crossing articulation.

Fig. 156: Mapping - Illustrating edges and access within study area (Author, 2011).

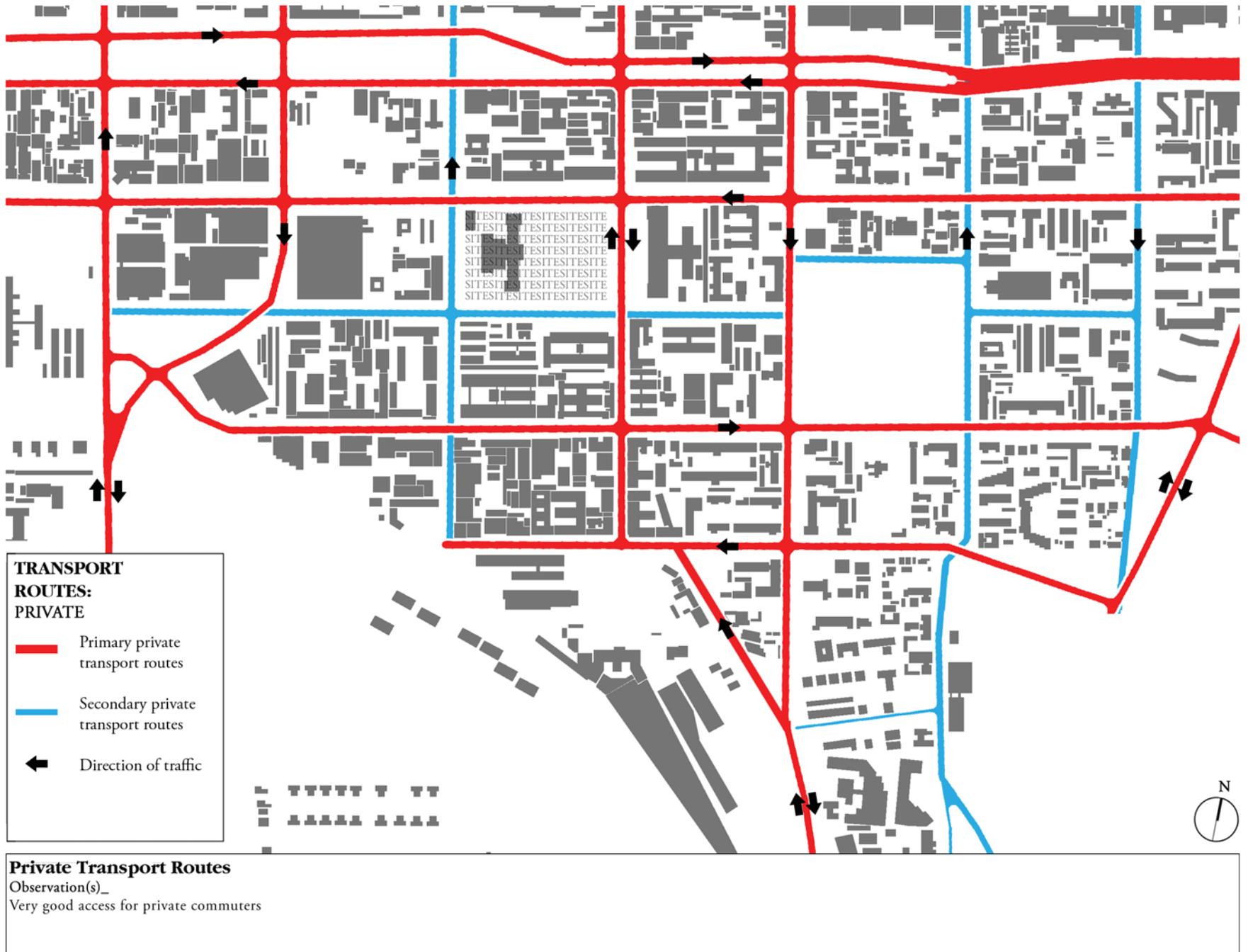
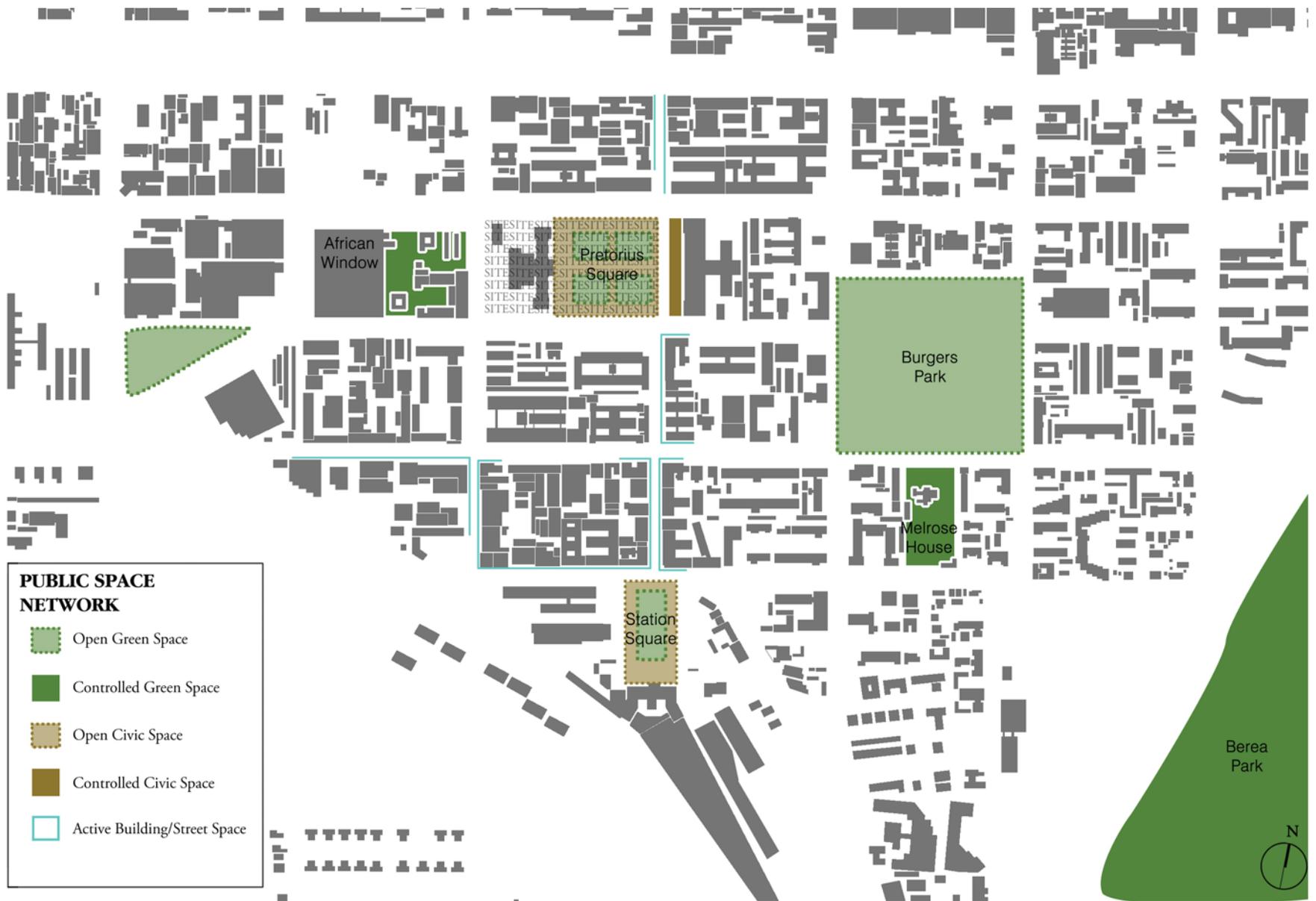


Fig. 157: Mapping - Illustrating private transport routes within study area (Author, 2011).



Public Space Network

Observation(s)_

Well established public space network, but lacks complexity and all spaces are not fully integrated and amalgamated with daily life

Proposal_

Introduction of a more intricate spatial network with a hierarchy of public spaces. Existing spaces to be made more accessible through the removal of boundaries

Fig. 158: Mapping - Illustrating public space network within study area (Author, 2011).

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