Expansion and adaption of

# The National Afrikaans Literature Museum and Research Centre

Understanding architectural language in heritage buildings and formulating an appropriate response.

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This dissertation is submitted in partial fulfilment of the requirements for the degree M.Arch. (Prof).

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Nel, M. 2016. Madeli Beyers. Photograph

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## Declaration of original authorship:

The work contained in this dissertation has not been previously submitted to meet the requirements for a qualification at this, or any other, institute of higher education.
To the best of my knowledge, this dissertation does not contain material that has been previously published or written by another person except where due reference is made.

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To God be all the honour, all the glory and all the praise.

# Preamble

This dissertation is a proposal for the expansion and adaption of the National Afrikaans Literature Museum and Research Centre (NALN) in the Old Government Building in President Brand Street, Bloemfontein. The new additions consist of a new, state-of-the-art archive, improved exhibition spaces and the addition of a new contemporary literature and works wing. The role of this public institution is the preservation of all materials related to and promotion of the history and development of Afrikaans. Housed in a heritage building, on a heritage site, within a conservation area, the theme of heritage architecture conservation is an important aspect of the investigation. The overarching aim of this proposal is to inspire a greater appreciation of the heritage building and Afrikaans literature. To achieve this, it is necessary to engage with the debate between respecting the heritage building and transforming the public institution to become more relevant to its contemporary use. It is about listening to the voice of the heritage building and finding an architectural response that makes a meaningful contribution to the dialogue that exists between old and new. This guided the research reported in this document.

First, the parameters of the research are set out by identifying the challenges and aims related to the proposed design, followed by an in-depth investigation of these parameters. This gathers all the relevant knowledge, which is then incorporated into an architectural design and technically documented proposal. Finally, this process is evaluated through critical reflection, consisting of personal contemplation, to evaluate the entire process followed and the success of the proposed resolution.

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# Introduction

What makes Bloemfontein unique? I asked myself this when deciding what topic to choose for this dissertation. I grew up in this city and spent the previous four years studying at the University of the Free State. During this time, I discovered a new-found appreciation for this city-with-the-soul-of-a-town. That is why, from the start, I wanted to base my investigation here. But where in the complex fabric of Bloemfontein exactly? To answer this, I was guided by the intriguing challenge of working with heritage buildings.

In the past, I have enjoyed working on projects related to heritage and the conservation of historic buildings. This interest led me to investigate the listed heritage sites in Bloemfontein, one of which was the Old Government Building in President Brand Street, at the west end of Charlotte Maxeke Street. Today this is also the National Afrikaans Literature Museum and Research Centre and the Sesotho Literature Museum. I have always been intrigued by language and literature and this project presented an opportunity to rekindle my interest in my home language, Afrikaans.

I made an appointment to visit the site and instantly fell in love. Here was a stately public building from a time gone by, harbouring a national literary treasure. How could I not want to propose a design that engages and celebrates this place, brimming with possibility. Thus, the journey that is this dissertation, began.

# Document Framework

To structure the research within this document the following document frameworks is used. These are structured into four main sections: topology, typology, morphology and tectonics. These are broadly used in the field of architecture, so for the sake of clarity, each term is briefly discussed.

This document was set-out into four parts. Part 01 and 02 use the four sections (topology, typology, morphology and tectonics) to identify the parameters (part 01) and consequent gathering of knowledge. Part 03 explored how this knowledge was applied to the architectural design through a series of development phases and Part 04 serves as a critical reflection on how appropriate the architectural response is.

## Topology
- spatial organization of landscape

Topology relates to spatial organization, linking to the Greek root: topos. In Greek, topos literally translates to 'place' (Compact Oxford English Dictionary, 2008: 1092). Architecturally, topology refers to the quantitative and qualitative phenomena of a specific place (Norberg-Schulz, 1985: 27). This means the different parts of a place, how they are organization and their interrelationship. These phenomena exist on many scales, physically and metaphorically, becoming the voice of the place. Topology therefore refers to this voice of the place and the various phenomena that it consists of.

## Typology
- typical function organization

Norberg-Schulz's definition of typology is the one applied to this study. Thus, typology is the way in which the different modes of dwelling manifests itself, using a multitude of universal meaningful identities which are translated into images or figures (1985: 29). In broad terms, typology refers to any typical way of dwelling, including typical ways of organizing building programs. This is called the functional typology and is the definition around which the document was structured.

## Morphology
- built form

The physical built form of architecture is defined as morphology by Norberg-Schulz (1985: 26). It refers to the fact that architecture becomes a physical phenomenon with a shape, texture, material and dimensions. It is the physical way in which the response to the voice of the place (topology) and the understanding of typical spatial organization (typology) takes on a spatial quality. It is the 'how' of the architectural response.

## Tectonics
- structure

Related to morphology is the idea of tectonics, as a physically built form consisting of physical connections that are made between different elements and materials. In a manner of speaking, tectonics is the 'how' of the 'how'. "Details are the mediate or immediate expression of the structure and use of buildings." (Frascari, 1996: 501). This document framework was based on the understanding of tectonics as the structural details derived from an understanding of the topology, typology and morphology.

# Research methodology

Based on an explorative research methodology, this dissertation is developed through investigations into the primary challenges and aims identified. By exploring the who (client and brief), what (functional typology), where (topology) and how (morphology), it is the aim of this investigation to gather the relevant knowledge for assembling an architectural design. This research originated from an interest in the NALN and the Old Government Building within which it is housed. As heritage is the main theme, the investigation was centred around this idea within the structure of topology, typology, morphology and tectonics.

## The sources forming a part of this explorative research are:

- The touchstone identifies the essence of what this intervention hopes to achieve. As it conveys the essence, the touchstone serves as a tool that can be referred to throughout the investigation. From this, four conceptual approaches are generated. This is followed by a reflection on the merits of each and from these a conceptual framework was generated.
- The conceptual framework serves as a map that guides all further exploration, especially in translating conceptual ideas into architectural application.
- The site investigation is an analysis of the landscape and context surrounding the site. This is done by gathering both quantitative and qualitative data at several scale levels. This included the macro, meso and micro contexts as well as the historic context.
- The precedents & case studies are analyses of existing architectural examples and case studies of places visited based on relevance to the investigation challenges and aims.
- A literature review of writings of Heidegger and Norberg-Schulz on the themes of language and the language of architecture is included to form a theoretical foundation for the design methodology.


CORON



# Part 01

# Overview

The process of identifying and defining the challenges and aims originates from an investigation into the topology or site. This intervention was sparked by a visit to NALN, so the location is the established starting point for the research process. There is also an existing functional typology and morphology to consider as the project investigation starts. Understanding the topology therefore establishes a foundation for investigating the typology and morphology of the new proposal.

The challenges and aims of the topology prove useful in identifying the pressure points existing on site regarding heritage, technical site conditions, urban context, and site orientation. These 'set the scene' for the typological and morphological investigations. The investigation into the typological challenges and needs start by investigating the existing functional typologies of the museum and archive. It looks at how its implementation can be re-imagined so that they can function optimally. The investigation into morphology is closely linked to the topology, given the importance of the existing built form, the Old Government Building. How the new form of the additions should respond to the existing form of the heritage building is the primary concern of this section. This challenge is concerned with the language of architecture and so a literary discourse concerning language is used as the vehicle to uncover how the new should respond to the old. Similarly, the tectonic investigation is concerned with the structural detailing of the connections between the old and new. It also addresses the technical requirements of the functional typologies identified (museum and archive) and the site condition challenges (water-logged site, new structure within old structure).

The four different sections of the investigation are co-dependent. The investigation and design process are thus not linear, but rather a constant back and forth. This layered process ultimately results in the identification of the challenges and aims.

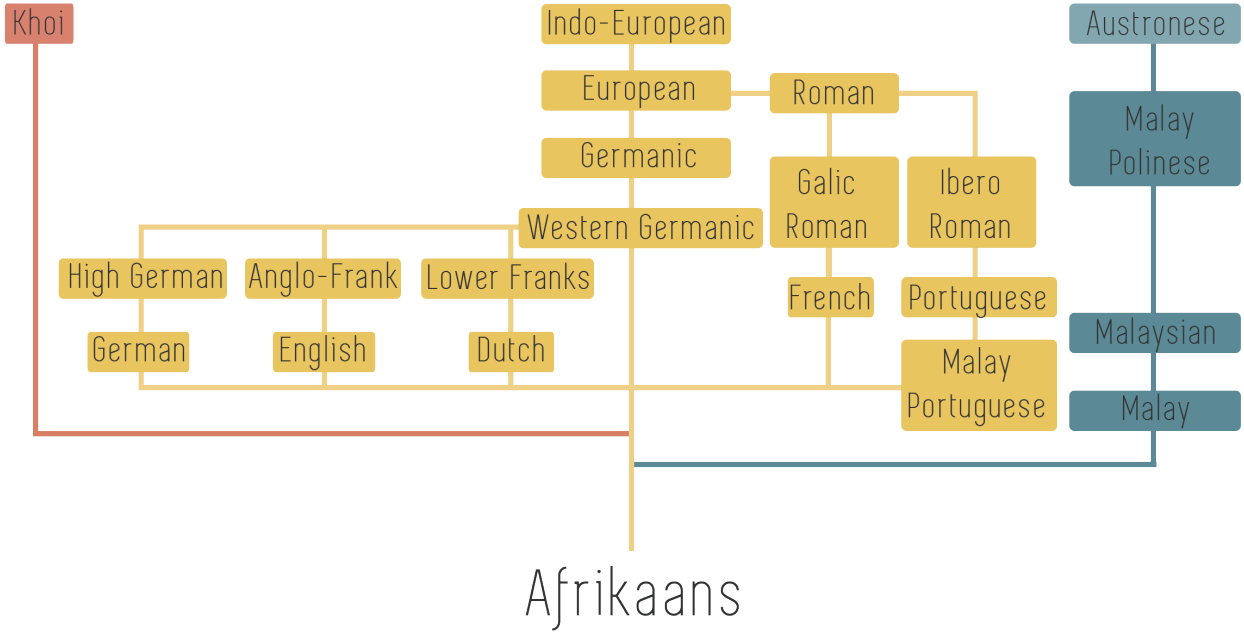



Fig. 1.1.2
Afrikaanse Taalmonument. 2017. *Die Afrikaanse Taalmonument: van Konsep tot Gestalte* (pamphlet - http://www.taalmuseum.co.za/wp-content/uploads/2018/01/Taalmonument-Inligtingsboekie-2017-AFR.pdf)

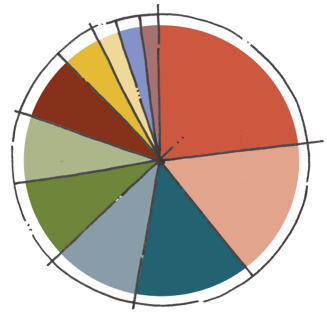
# 1.1 Project Rationale

The project rationale provides a backdrop for the investigation. It is based on the conservation of a language, as well as the connection between linguistic and architectural conservation. A brief background of the Afrikaans language will be followed by a discussion on the importance of language conservation, the role of NALN in linguistic and architectural conservation.

## 1.1.1 Brief background of the Afrikaans language

As one of the eleven official languages of the country, Afrikaans forms part of the diverse and rich linguistic fabric of South Africa. It is an important part of our cultural heritage with a complex and, at times controversial history, linked to various cultural groups and the history of South Africa. As demonstrated in figure 1.1.2 the origins of Afrikaans includes languages such as Malaysian, Portuguese, French, Dutch, English German and Khoi (Afrikaanse Taalmonument, 2017: online). Over 5 million South Africans speak Afrikaans and it is also spoken in 6 other countries, such as the United Kingdom and Australia (SAHO, 2018: p1). Its history is therefore complex, holding different meaning for different cultural groups, both positive and negative.

The history of Afrikaans is complex because the history of South Africa is complex, and both could be said to have influenced the other. The narrative of South Africa shaped Afrikaans as we know it today. An in-depth investigation of this relationship is beyond the scope of this dissertation, but a brief background is given to situate the study and architectural exploration.



official languages of RSA:

- IsiZulu (11.58m)
- IsiXhosa (8.15m)
- Afrikaans (6.85m)
- English (4.89m)
- Sepedi (4.62m)
- Setswana (4.07m)
- Sesotho (3.85m)
- Xitsonga (2.28m)
- SiSwati (1.3m)
- Tshivenda (1.21m)
- IsiNdebele (11.09m)
- None dominant

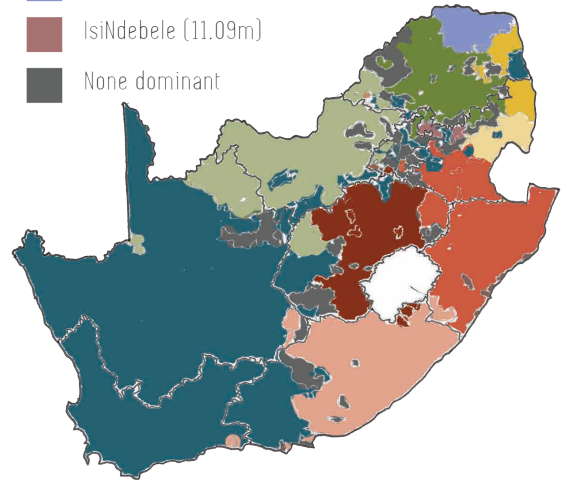


Fig. 1.1.1
*11 official languages of South Africa percentage and geographic distribution in percentage.* Figure (Based on: Statistics South Africa 2011 Census - http://www.statssa.gov.za and Brand South Africa - https://www.brandsouthafrica.com/south-africa-fast-facts/geography-facts/languages)

# The history of Afrikaans

## a brief overview



Fig. 1.1.3
Unknown
.s.d.
*Khoi-Khoi trading with Dutch seafarers.*
(Augusta De Mist - http://www.augustademist.com/2012/01/began-africa/)

**1613-1630**

**Event:**
Dutch merchants trade with Khoi-Khoi along the South African coast (Koch, 2015: 331).

**Comment:**
Some historians believe this contact between the Khoi-Khoi and visiting seafarers to be the origin of Khoi Afrikaans, the first form of Afrikaans (Van Rensburg, 2016: 2). Afrikaans can therefore be seen as a product of the need for different culture groups to communicate.

**1663**

**Event:**
A Dutch-Khoi-Khoi dictionary is compiled by Georg Friederich Wreede[n] but remains unpublished. (Koch, 2015: 1663).

**Comment:**
This indicates progression in the relationship between the Dutch and Khoi-Khoi's level of communication. It also indicates progression towards documentation of an evolving language in writing.

**1795**

**Comment:**
Indication of the use of Afrikaans by locals as it is the tongue in which the author chooses to express himself.

**Event:**
The first known example of written Afrikaans is a poem about the Battle of Muizenberg (SAHO, 2018: p3).




Fig. 1.1.4
Friderici, F.J.C. s.d.
*Muizenberg, 7 August 1795.*
(Cape Town - South African Parliamentary Collection 17998)

**1807**

**Comment:**
The diverse origins of Afrikaans are demonstrated in its early use by different cultural groups.

**Event:**
375 children of slaves are educated in a Muslim school in using Arabic Afrikaans (Afrikaans.com, 2016: online)

**1818**

**Comment:**
Like NALN, this is an institutional space that allows for public engagement with literature.

**Event:**
The opening of the first public library (South African Public Library) (Koch, 2015: 338).




Fig. 1.1.5
Angas, G.F. s.d. *Malay school: boys learning to read the Koran.* Painting (Cape Town - South African Parliamentary Collection)

**1828**

**Event:**
English becomes the official language of the colony (Koch, 2015: 338).

**Comment:**
Language is used as a political tool, to assert British rule.
The strict Anglicisation oppresses non-English speaking groups, making all official matters difficult for them, especially legislative matters.

**mid 1800s**

**Comment:**
From this it becomes apparent that Afrikaans does not belong to only one cultural group.

**Event:**
*Bayaan-ud-djyn* by Abu Bakr in Afrikaans written in Arabic text (SAHO, 2018: p3).

**1850s**

**Comment:**
Place of dwelling influences the development of language.

**Event:**
Three main Afrikaans dialects develop:

- Cape Afrikaans, influenced by the Malay slaves
- Orange River Afrikaans, influenced by the Khoi languages
- Eastern Border Afrikaans, influenced by Dutch, English and Xhosa (Afrikaans.com. 2016: online).

**1853**

**Comment:**
Language is used as a political tool, to assert British rule.
The strict Anglicisation oppresses non-English speaking groups, making all official matters difficult for them, especially legislative matters.

**Event:**
English declared the only parliamentary language, excluding Dutch and Afrikaans speakers from involvement in parliamentary proceedings (Koch, 2015: 342).

**1874-1890**

**Comment:**
Ownership of the language is taken by those who cherish it.

**Event:**
*Eerste Taalbeweging*( First Language Movement)

**1875**

**Comment:**
The responsibility to promote and grow the language is recognized.

**Event:**
Association of True Afrikaners [*Genootskap van Regte Afrikaners, GRA*] established in Paarl – purpose is to emancipate Afrikaans (Koch, 2015: 344).

**1876**

**Comment:**
Growth manifests in the availability of literature in Afrikaans for the public.

**Event:**
The first monthly Afrikaans magazine, *Die Afrikaanse Patriot*, is published (Koch, 2015: 344).



DIE

Afrikaanse Patriot.

"Eert uwen vader en uwe moeder, opdat uwen dagen verlengd worden in het land dat u de Heere uw God geeft."—*Het vijfde Gebod.*

DEEL I.] SATERDAG, 15 JANUARY, 1876. [No. 1.

"DIE AFRIKAANSE PATRIOT."

Een Afrikaanse koerant! Wie het dit ooit gedroom! Ja, Afrikaanders! een koerant in ons ei'e taal! Dit het baiang moeite gekos om so vêr te kom; dit kan ek julle verseker, want die meeste Afrikaanders is nes steeks pêrde, hulle wil mos nie glo dat ons een ei'e taal het nie. Die ou'e Patriotte hou vas, en klou vas, an die *Hollanse* taal; die jong mense vind die *Engelse* taal, weêr so danig mooi en o'ertui'e gaat net so

Fig. 1.1.6
1876. *Front page of Die Afrikaanse Patriot, 15 January 1876.* (National Library of South Africa -

**1877**

**Event:**
The GRA starts to publish its periodical, *Die Afrikaanse Almanak* (Koch, 2015: 344).

**1890**

**Event:**
South African Language Union [*Zuid-Afrikaanse Taalbond*] is established, the purpose of which is to support Afrikaans and Dutch (Koch, 2015: 346)..

**Comment:**
Support for Afrikaans is established in yet another official manner.

**1902**

**Comment:**
Connection between the Afrikaner culture and the Afrikaans language starts to become very prominent. This is an idea which is later emphasised by the National Party, forgetting the other cultural groups that are closely linked with the development of Afrikaans.

**Event:**
*Akrikaner Broederbond* is established to promote Afrikaner culture and Afrikaans (SAHO, 2018: p4).

**1905**

**Comment:**
This is an important moment in the development of Afrikaans, as it becomes a language that can be used for poetic expression on a more complex level.

**Event:**
*Tweede Taalbeweging* (Second Language Movement)
Poets start to express themselves in Afrikaans e.g. Eugene Marais' *Winternag* (SAHO, 2018: p2)



Fig. 1.1.7
Unknown. s.d. *Eugene Marais as a young man.* Photograph (Litnet - https://www.litnet.co.za/eugene-marais-die-boheemse-boer-in-londen/)

**1908**

**Comment:**
The voice of the people is now also heard through prose and music in Afrikaans.

**Event:**
The Afrikaans art song starts to develop with works such as J.H.G. Bosman's musical composition for *Winternag* (SAHO, 2018: p2)

**1914**

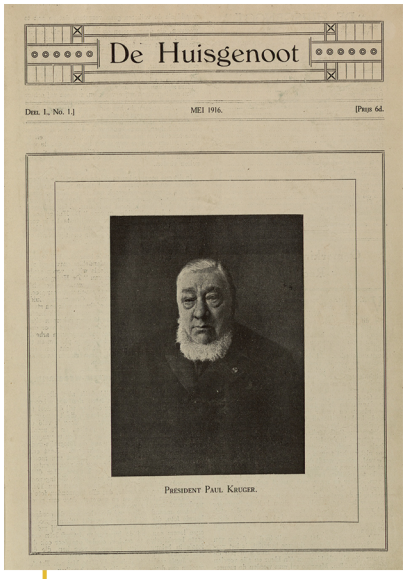
**Comment:**
Official recognition improves the status of Afrikaans.

**Event:**
Afrikaans recognized by the Cape Provincial Council (SAHO, 2018: p2). It also becomes an official language in schools (Afrikaans.com, 2016: online).




Fig. 1.1.8
Hoekatra. J. 1977. *South African Post stamp with image of Totius.* Figure (Versindaba - http://versindaba.co.za/2018/06/07/nini-bennett-van-afstand-en-verbintenis/totius-3/)

Fig. 1.1.9
Huisgenoot. 1916. *Cover of first edition of Die Huisgenoot May 1916.* Image.(UPLS DIgitisation Project - https://uplibrarydigitisation.wordpress.com/2012/04/03/cover-design-and-discussion-of-1916-huisgenoot-first-edition/)


De Huisgenoot

Deel. I. No. 1.] MEI 1916. [Prijs 6d.

President Paul Kruger.

**Comment:**
Afrikaans becomes a bigger part of the cultural voice through its use in music.

Gideon Fagan, Arnold van Wyk, Hubert du Plessis and Stefans Grove make significant contributions to the development of Afrikaans music (SAHO, 2018: p2).

**Comment:**
Afrikaans is recognized as a language with formal structure and academic value.

**Event:**
The first edition of *Afrikaanse Woordelys en Spelreëls* is published (SAHO, 2018: p2).

**Comment:**
Government formally recognize the value of and gives prominence to Afrikaans.

**Event:**
Afrikaans is recognized by the legislator (SAHO, 2018: p2).

1915

1916

1917

1925

Before 1930

After 1930

**Event:**
The first edition of *Die Huisgenoot* is published (SAHO, 2018: p2)

**Event:**
The first Hertzog Prize for Literature is awarded to Totius (SAHO, 2018: p2)

**Comment:**
The literary value of Afrikaans is recognized and valued by the public.

S. le Roux Marais, Stephen Eyssen, and M.L. de Villiers make significant contributions to the development of Afrikaans music (SAHO, 2018: p2).



Fig. 1.1.11
Unknown .s.d. *Elisabeth Eybers*. Photograph (Versindaba - http://versindaba.co.za/tag/elisabeth-eybers/)

**1931**

**Event:**
The first Afrikaans record is made of Chris Blignaut (Afrikaans.com. 2016: online).

**Event:**
The first Afrikaans film, *Moedertjie*, premiers (Afrikaans.com. 2016: online).

**1933**

**Comment:**
Afrikaans speaking people are now able to express themselves spiritually in their own language.

**Event:**
The first Afrikaans Bible is launched in Bloemfontein (SAHO, 2018: p2).

**1936**

**Comment:**
Gender-boundaries are crossed using Afrikaans.

**Event:**
Elisabeth Eybers is the first female poet to write in Afrikaans (SAHO, 2018: p2).

**1945**

**Comment:**
Arts previously accessible to only a privileged few, now becomes accessible to the Afrikaans speaking public.

**Event:**
Operas are translated into Afrikaans (SAHO, 2018: p2).

**1948**

**Comment:**
Afrikaans is used as a tool to supress and exclude other groups.

**Event:**
The National Party wins election and promotes Afrikaner Nationalism by promoting Afrikaans and favouring Afrikaans speakers (SAHO, 2018: p4).

**1960s**

**Event:**
An era of protest literature emerges, speaking out against the government and inequality (SAHO, 2018: p2).

**Comment:**
Afrikaans is used to rebel against inequality.
(Koch, 2015: 1663).

**1963**

**Comment:**
Government uses legislation to supress resistance by artists.

**Event:**
The Publication Board bans lyrics, films and publications (SAHO, 2018: p2).

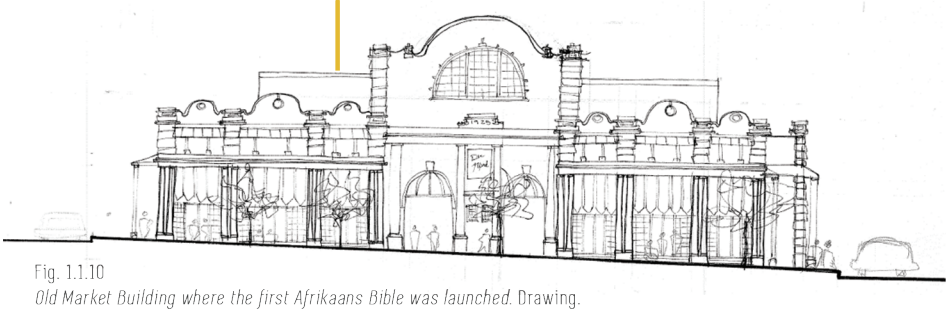


Fig. 1.1.10
*Old Market Building where the first Afrikaans Bible was launched.* Drawing.



Fig 1.1.13
Nzima, S. 1976. *Soweto Uprising – the death of Hector Pieterson*. Photograph. (Time 100 photos - http://100photos.time.com/photos/sam-nzima-soweto-uprising).

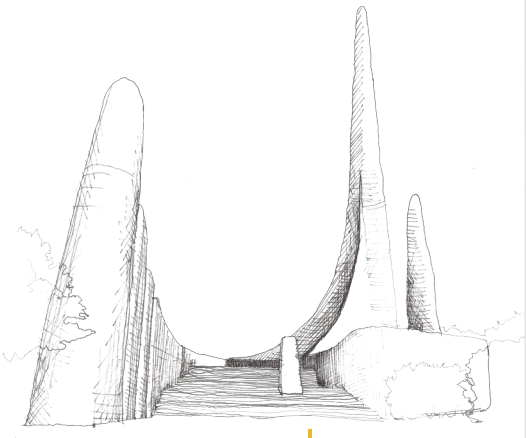


Fig 1.1.12
*Afrikaanse Tallmonument*. Sketch

**Comment:**
Afrikaans is recognized as part of South African history.

**Event:**
The *Afrikaanse Taalmonument* is inaugurated (Afrikaans.com. 2016: online).

**Comment:**
People react against unfair governance by rejecting, amongst other things, Afrikaans.

**Event:**
The Soweto Uprising takes place, protesting Afrikaans as the sole medium of instruction in 'Bantu' schools (SAHO, 2018: p4).

**Comment:**
Afrikaans artists join the voice against unfair rule.

**Event:**
Voëlvry Beweging (SAHO, 2018: p2).

**Comment:**
Artists recognizes the need to promote Afrikaans as an entity separate from government.

**Event:**
The start of annual arts festivals such as the KKNK, Aardklop, InniBos, etc. (SAHO, 2018:

**Comment:**
The removal of a language from the tertiary educational platform might pose a threat to its development and preservation.

**Event:**
Intense debate and protest take place concerning Afrikaans as a language of instruction at tertiary education institutions (Afrikaans.com. 2016: online).

1970s

1975

1976

1980s

1990

1994

2015

**Event:**
*Musiek-en-Liriekebeweging:*
Important figures of this movement include Jannie du Toit, Koos du Plessis, Laurika Rauch, (SAHO, 2018: p2).

**Comment:**
Artists recognizes a renewed need to grow and promote Afrikaans as a voice for artistic expression.

**Event:**
The first democratic election takes place and the ANC leads South African into an era of reconciliation (Afrikaans.com. 2016: online).

**Comment:**
Afrikaans is no longer one of two official languages, but it rather takes its place in the nation's diverse cultural landscape, as one of eleven official languages.

From this brief overview, a few observations concerning Afrikaans can be made. From the start, it becomes clear that there are several cultural groups to whom the language may hold cultural significance. It has roots in the Khoi-Khoi and Muslim slave cultures and in the 1850's three distinct Afrikaans dialects existed. The Afrikaans we know today and the white Afrikaner subculture that we associate it with is therefore only a single voice in a far more complex narrative.

The history of Afrikaans can also be an example of how a language can become a political or cultural symbol, that holds different meanings for different people at different times. Afrikaans was a symbol of nation-building and independence from European rule at one time and the voice of oppression at another. It was used to express poetry and beauty, as well as anger and indignation. It becomes a symbol with constantly changing meanings and the debate concerning what it currently symbolizes, is just as intriguing as investigating what it has meant in the past.

## 1.1.2 Importance of language preservation

"Language diversity is essential to the human heritage.
Each and every language embodies the unique cultural wisdom of a people.
The loss of any language is thus a loss for all humanity."
(UNESCO,2003: p1).

Languages embody culture. Within them is contained something of the essence of the cultural groups that speak the language. When a language is lost, it could be said that a part of the cultural group's identity is also lost. Languages are an integral part of culture, history and landscape. The active preservation of language is therefore of the utmost importance. This is also true for the Afrikaans language. It has been discussed how Afrikaans belongs to more than just one cultural group. Afrikaans can also be a container of South African history, since the development of both is so interconnected. Therefore, in preserving the Afrikaans language, a living part of our nation's history is kept alive for the enlightenment of future generations.

## 1.1.3 NALN and the preservation of Afrikaans

NALN plays a very important role in the preservation of Afrikaans. As a linguistic archive, NALN safeguards all materials related to Afrikaans literature, ensuring that no part of it is lost due to decay or neglect. The exhibitions and public events that are held here also encourages the public to engage with the language, keeping it alive and relevant. A lack of facilities to perform this role optimally is a very real challenge faced by the institution. Therefore, an intervention such as the one proposed in this dissertation, is necessary. It not only supports the existing role of NALN, but it also proposes to expand its capacity to do more in the future.

# 1.2 Topology

The National Afrikaans Literature Museum and Research Centre (NALN) is currently housed in what was originally the Old Government Building in President Brand Street, at the western end of Charlotte Maxeke Street (previously Maitland Street). As a heritage site in a conservation area this location is appropriate for a museum and archive which protects cultural heritage, the National Afrikaans Literature collection and the Sesotho literature collection. The site for the proposed design is therefore still the Old Government Building and its surrounding Historic Tree Garden. This includes the President Brand Street Heritage Area and surrounding urban context, since a public institution and heritage site are related to a large social landscape. The Old Government Building has gone through numerous phases of development, including a rebuild after a large fire. Restorations and additions by Roodt Architects were also done. It is therefore a complex site, especially in terms of its historic narrative.

## 1.2.1 Challenges identified

As a heritage site, the topological investigation is centred around heritage conservation. On a larger urban scale, the site's lack of engagement with the public presents a challenge, since public institution and places of heritage should remain relevant to the public to ensure the survival of the heritage. The building introduces legislative challenges to the proposed design as a heritage site. It also presents an ontological challenge, as the architectural style of the building, although historically valuable, no longer related to the contemporary South African city dweller. This results in a public building disconnected from the public. It becomes apparent, therefore, that the main topological challenge of this intervention will be to find the balance between appreciation/protection of the existing and a transformation into something new and relevant to a contemporary South African urban context.

## 1.2.2 Aims

The primary aims of this intervention are to understand how the proposed design can respect the heritage on site, whilst also relating to a contemporary user. This is to be achieved through a critical investigation into the context on all scales, spatially and historically. It also includes a conservation strategy (see chapter 2.4.5), a required procedure for projects involving heritage buildings.



# 1.3 Typology

(Functional)

Buildings are built systems where specific functions must take place. These functions are determined by the needs of the client and users and result in a brief set up by the client and architect. A typology is any typical way of being or dwelling and in architecture there are typical ways of being or dwelling within built structures. There are many architectural typologies that vary in scale, from small structural connections to settlement patterns. Within this range are functional typologies, defined as the typical way in which specific functions are organized and communicated in architecture. The functional typologies of this intervention are a 'museum' and an 'archive', both of which are classified as 'public institution' functional typologies. Investigating these functional typologies will reveal different design solutions, some of which may prove useful for application to the proposed design and some which may not be appropriate to the specific conditions of this project.

## 1.3.1 Client

NALN is run by the Free State Department of Sports, Arts, Culture and Recreation and requires an expansion of its facilities, which must be adapted to the heritage building it is housed in. NALN has the dual function of being both a museum and research centre, which houses an estimated 75 000 000 items related to the history and development of Afrikaans literature, music and performance (FSSACR 2017: 2). The museum exhibits a selection of these items and hosts a variety of public and private events.

## 1.3.2 Users

As a public institution, the building has had a variety of users over the years and continues to house many different functions. The Research Centre must accommodate archive staff and visiting researchers. The museum is run by a small group of staff and receives exhibition visitors in numbers ranging from a single visitor to groups of up to 200. The museum also hosts events and requires more adaptable spaces for the changing needs of presenters and attendees. As a public institution in the centre of the city, the general public is considered to be a significant user. Even if these users never enter the building, NALN's large garden is an important part of the urban fabric.

## 1.3.3 Initial Brief

The client requested an adaption of the existing structure to better suit the current use and future functional requirements. The museum exhibition must be expanded, including space for temporary exhibitions, permanent exhibitions and a new wing for contemporary literature and works. A larger multi-media auditorium also forms part of the requested additions. The research centre requires an improved reading room and better archive facilities. This includes spaces for the restoration, organisation and storage of historic documents/items. These spaces must meet specific technical standards. Furthermore, the building overall requires better toilet facilities and accessibility for people of different abilities. The historic tree garden and surround landscaping must be redesigned to be more sustainable. Re-designing this important public space will lower maintenance costs, reduce the use of water and create a public space that can be used by the every-day city dweller.

## 1.3.4 Challenges identified

Currently, the heritage building must function as a museum and archive, but originally it was designed as an office building. The heritage building must therefore be adapted to better suit its current and future use. The expansion of the museum exhibition is an important part of the brief, so the interior layout is adapted in the proposed design. Specific conditions must be met in the exhibition and archive spaces, because they contain sensitive, irreplaceable material, particularly fragile paper. This requires both adaption of the existing and introducing new, purpose-built facilities. Accessibility is a problem in terms of vertical circulation and the exhibitions are focused on sighted visitors. Audio and tactile elements thus need to be a consideration in the adaptation.

Additionally, the Dingolweng Sesotho Literary Museum (SLM) is also housed in a small section of the building. Providing facilities for the literature of another official language is an important step forward in our nation's cultural transformation and it is proposed that the next step should be a purpose-built facility for the SLM, designed by someone who understands the cultural background of the language. This allows for the growth and development of the SLM as an important cultural resource, recognizing its status as a part of our nation's diverse cultural heritage. The scope of this dissertation is therefore focused on NALN. An intervention designing a museum and archive for the SLM is another dissertation in and of itself.

## 1.3.5 Aim

Having established that NALN is the focus of this dissertation, the primary aim of this intervention, in terms of function, is to adapt and expand the existing building to best suit its new use as a museum and research centre. Respecting the heritage building is as important as ensuring that it meets contemporary needs. This will ensure the longevity of this public institution. Through adaption and extension, the new intervention proposes to expand NALN's potential to function as a contemporary museum and research centre. Accessibility to all members of the public is also a key objective of this expansion. This refers to the physical accessibility of the exhibitions and creating public space that engage with the public, as well as the figurative accessibility of NALN as an institution that actively engages with changing literature, schools of thought and social climates.

# 1.4 Morphology

Morphology deals with the form-giving of architecture and in this specific project there is already an existing morphology: the Old Government Building. Thus, the morphological investigation seeks to find an approach for addressing this existing morphology in the new form-giving of the new additions to the building. It starts with a theoretical discourse concerning Heidegger's theory of language and Norberg-Schulz's application of these ideas to the language of architecture. This results in a theoretical standing which then guides the design process. Brief precedent studies are also done to explore the different ways in which contemporary architecture can respond to heritage buildings. By combining these lessons learnt from the architectural examples, with the academic literature review and the design exploration explained in Part 03, the form of the new additions and expansions is developed through a process which is both considerate and innovative.

## 1.4.1 Challenges identified

The Old Government Building has a very distinct character and architectural form, which is part of why it is a very valuable heritage artefact. The form of the new may not overpower the existing, but also should not be an inauthentic copy, as this will dilute the voice of the heritage architecture without making any truly valuable contribution to the dialogue that exists between contemporary society and heritage buildings. The primary challenge, in terms of the form-giving of any new additions or adaptions, is therefore to find the balance between respecting the heritage's morphology and introducing a new morphological voice relevant to a new era.

## 1.4.2 Aims

The primary aim of this morphological investigation is to achieve a form that finds the balance between protection and innovation. Using Heidegger's (1951) understanding of language and Norberg-Schulz's (1985) understanding of the language of architecture, the aim of the theoretical discourse is to establish a theoretical foundation that supports a sensitive architectural approach to the heritage building. Such an approach highlights the importance of listening to the voice of the place, before responding appropriately through a new form-giving. The aim of the precedent studies (section 2.6.2) is to explore the variety of possible architectural responses to heritage buildings, critically reflecting on each example's merits and short-comings.

# 1.5 Tectonics

The structure of the proposed design is firstly determined by the morphology of the new additions. After the design exploration, it was established that this will consist of a steel structure that sits within, as well as floating over, the existing building. Building underneath the existing structure will also require foundation under-pinning and tanked, drained cavity basement construction. Between all these different structural systems and the existing structural system, there will be many points of connection. These must be detailed, not only for structural stability but also because these points are fundamental in expressing the overall conceptual approach towards the heritage building.

## 1.5.1 Challenges identified

Connections between the existing and new and articulation of these connections are the primary challenge of this proposal. The structural connections are the physical means by which the sensitive, yet innovative approach is articulated. These connections exist on numerous scales: the connection between the old and new structures; the connection between the underground and over ground structures; the connections between different materials. The typological investigation also presents controlled environment conditions for the museum and archive, which will be explored on a technical level. The site conditions also present the challenge of a water-logged soil. Therefore, a tanked drained cavity basement system will be investigated as a possible solution for all underground structures.

## 1.5.2 Aim

The aim of the tectonic investigation is to resolve all the technical challenges identified in a manner which supports the overall theoretical approach of the proposed design, enhancing the architectural quality of the intervention. This is achieved through a structural philosophy based on the concept of the structural detail as an expression of changes in architectural language (Gregotti, 1996: 496) and a technical investigation of the numerous challenges identified above, reported in the technical report (section 2.7.2). This is then incorporated into the design methodology, to ensure a technically sound proposal.

# 1.6 Research question:

Identifying the challenges and aims of the topology, typology, morphology and tectonics sets the parameters of the investigation to follow. These are also used to develop the following research question to guide the investigation.

How can an understanding of the language of architecture aid in the design of an appropriate architectural response to heritage buildings?

Sub-question:

How can Heidegger's writing on language lead to a better understanding of the language of architecture, to guide the design of the expansion of NALN using the language of architecture?

## Challenges and aims summary:

### Topology

Demonstrate an understanding of - and appreciation for the existing and propose an intervention which promotes such an appreciation and enhances the state of the existing through appropriate spatial organization.

### Typology

Re-design the functional organization within the existing building and introduce new purpose-built facilities, which will meet the identified needs, ensuring the heritage building is better adapted to its new use and thus also ensuring the longevity of the heritage building.

### Morphology

Respond with an architectural form that is appropriate for both the heritage building and the contemporary city by finding the balance between listening to the existing and contributing something new and relevant to the dialogue.

### Tectonics

Resolve the technical challenges uncovered in a technically sound manner that articulates the intended response of the proposed design.



# Part 02

# Overview

This chapter is a collection of knowledge relevant to the proposed design, based on the parameters set out in Part 01. First a conceptual foundation for the investigation is set out, starting with the touchstone. Capturing the essence of the intervention, the touchstone serves as a point of reference, keeping the investigation focused. This is followed by a preliminary exploration of four conceptual approaches based on the touchstone.

Next, using the challenges and aims identified in Part 01 as a guide, the topology, typology, morphology and tectonics of the new intervention are investigated. Starting with topology, a quantitative and qualitative analysis is conducted at the following scales: macro, meso, micro and historic. This leads to a heritage impact assessment, concluding in a conservation strategy.

The typological investigation starts by investigating the client, users and the development of the brief. The application of the functional typologies is investigated by analysing precedents as ways in which the museum and archive functional typologies have been applied in built examples. The lessons learnt from these studies is part of the process of understanding how the functional typologies can be accommodated in the proposed design. Similarly, the morphological investigation focuses on how the form-giving of the new can best respond to the existing. This is based on a theoretical discourse and precedent studies of other interventions involving heritage buildings.

The tectonic investigation is based on the requirements uncovered in the topology, typology and morphology sections. A structural philosophy provides a theoretical foundation, followed by a practical investigation into the spatial requirements and structural systems.

The aim of the tectonic investigation is to resolve all the technical challenges identified in a manner which supports the overall theoretical approach of the proposed design, enhancing the architectural quality of the intervention. This is achieved through a structural philosophy based on the concept of the structural detail as an expression of changes in architectural language (Gregotti, 1996: 496) and a technical investigation of the numerous challenges identified above, reported in the technical report (section 2.7.2). This is then incorporated into the design methodology to ensure a technically sound proposal.

Ultimately, this concluded in a design methodology, which was applied in Part 03 to generate the proposed design.

# 2.1 Touchstone

## *transformasie*

Heritage is a fundamental aspect of this dissertation. This leads to the following question: What does this intervention hope to achieve regarding heritage? The answer: transformation. Thus, the intervention does not aim to impose a new thing on the old but rather to change the existing thing itself, celebrating the existing. The thing itself becomes something new and dynamic.

The word transformation can be translated into Afrikaans as *gedaantewisseling*, roughly translated to meaning 'to change the outward appearance.' (Van Schaik se Verklarende Afrikaanse Woordeboek, 1982: 243) The dictionary's clarifying sentence for the root word, *gedaante* (true form), indicates it is not only about the outward appearance, but about *openbaring* or revelation. This is a revealing of the personal/intimate to others. Transformation is to change something's appearance to reveal the unknown. This is the aim of the exploration: that the transformation brought about by the expansion of NALN will result in a greater appreciation for heritage.

Transformation

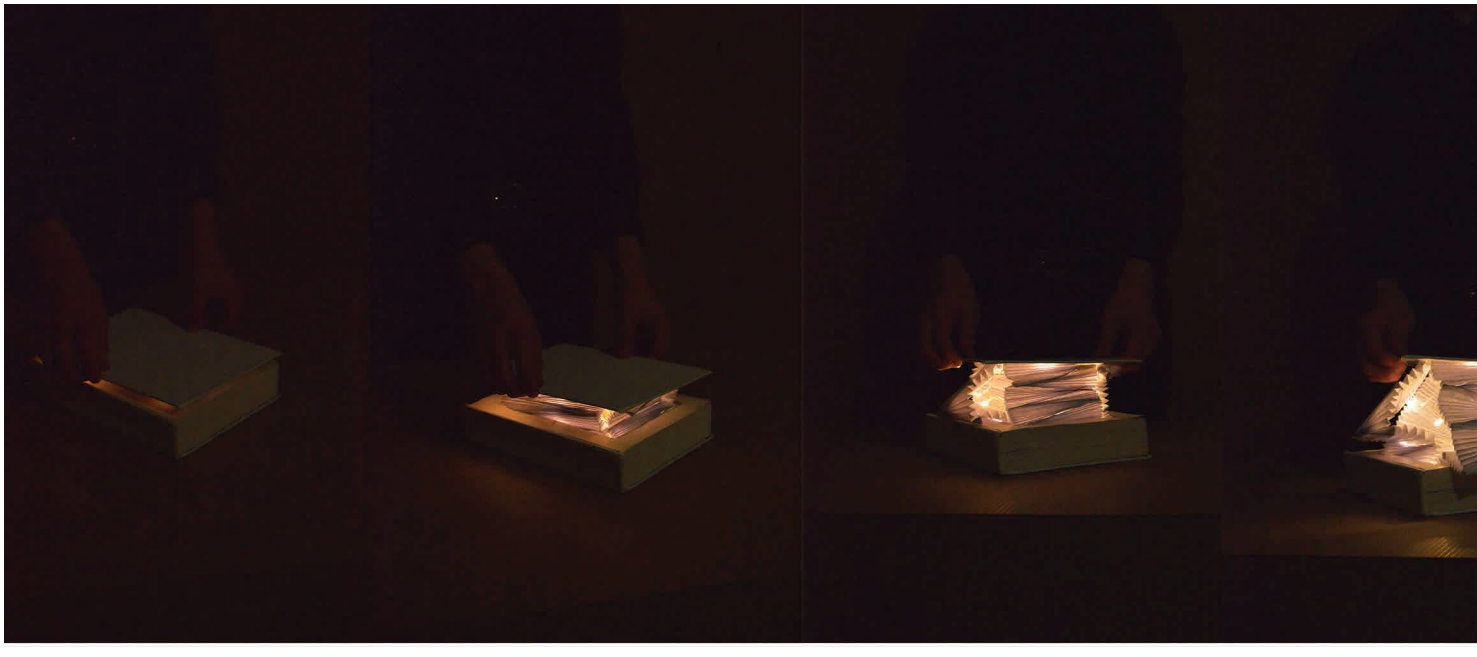
Outward appearance, form
To show its true form: to reveal what it truly is - *Being*

Revelation

### Representation of *transformasie*

The touchstone is an interactive piece embodying transformation. The first element of the touchstone is a closed, blank book. This represents NALN before the intervention. There is no hint of the book's content and no engagement with the viewer.

Lifting the book cover, the piece is transformed into a twisting light. It becomes visually engaging, with the light revealing the text. The action of lifting represents the new proposed design challenging the existing NALN and the new form represents *openbaring*. The exciting potential of both the heritage architecture and the Afrikaans Literature collection is revealed. It is important to note that nothing new is added to the piece. The book itself is simply opened to reveal the inside and thus the book itself is transformed.



## *Transformasie :*

*Gedaantewisseling*

(Van Schaik se Verklarende Afrikaanse Woordeboek, 1982: 1131)

## *Gedaantewisseling :*

*wisseling van die uiterlike*

(Van Schaik se Verklarende Afrikaanse Woordeboek, 1982: 243)

## *Gedaante :*

*uiterlike voorkoms, figuur, vorm, gestalte*
*bv. hom in sy ware gedaante vertoon: hom openbaar soos hy regtig is*

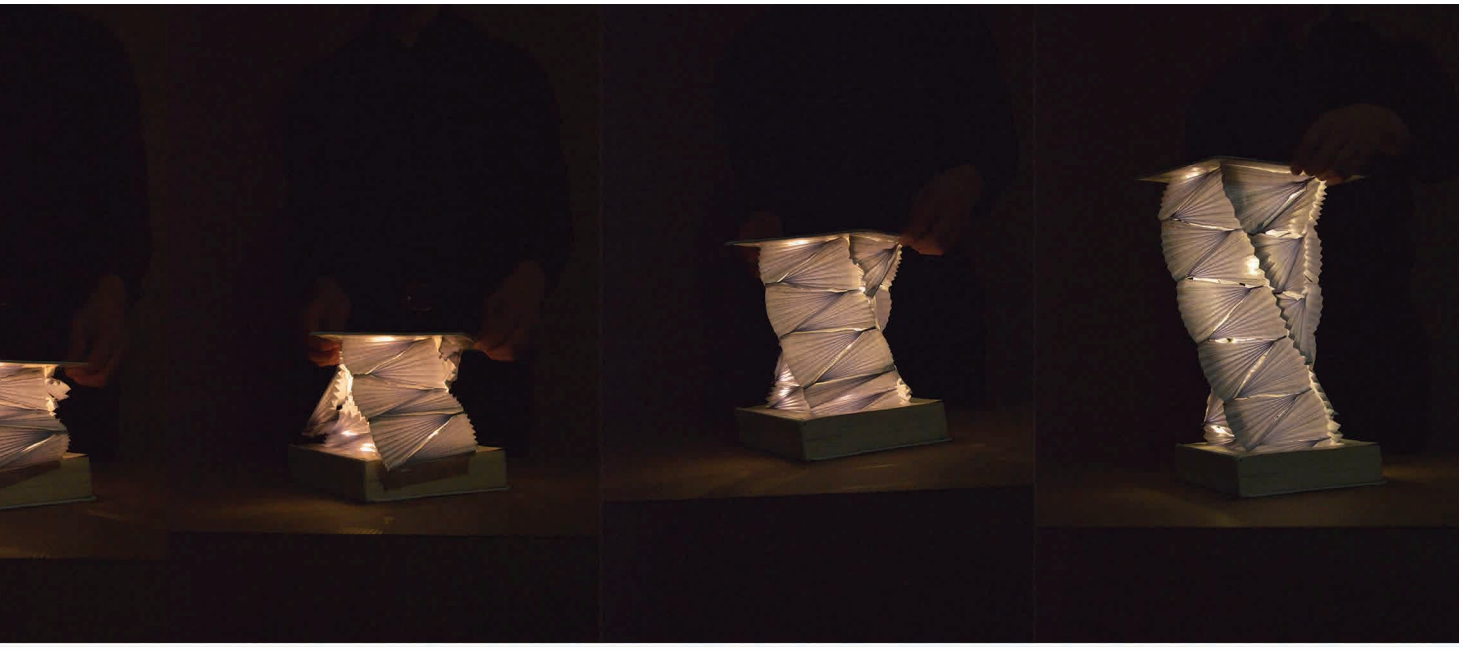
(Van Schaik se Verklarende Afrikaanse Woordeboek, 1982: 1131)

## *Openbaring :*

*kenbaarmaking van die persoonlik ingegewene en aan andere nie bekende; kenbaarmaking van die verborgene*

(Van Schaik se Verklarende Afrikaanse Woordeboek, 1982: 719)



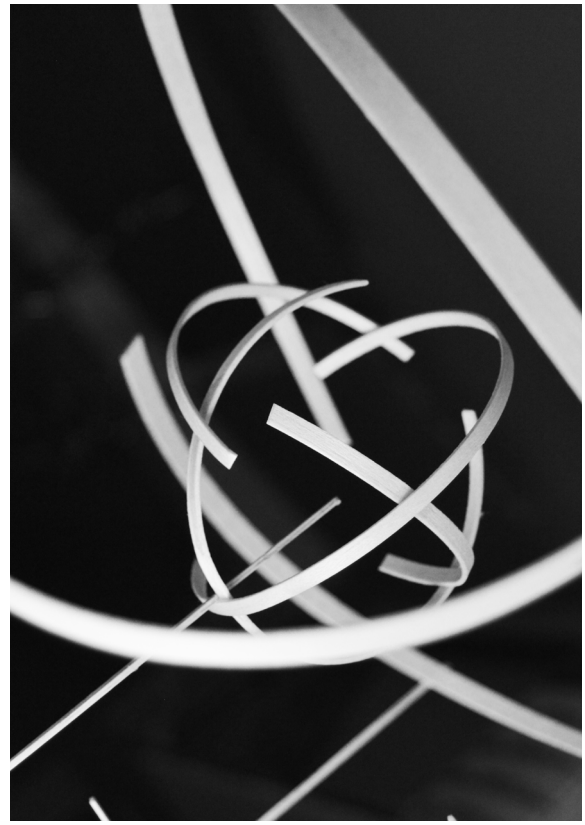


# 2.2 Formative conceptual ideas

The following preliminary conceptual explorations serves as the first line of inquiry into how the touchstone's idea of transformation can be translated into an architectural approach. Each concept takes the idea of transformation and investigates an approach for transforming the architecture of the heritage building.

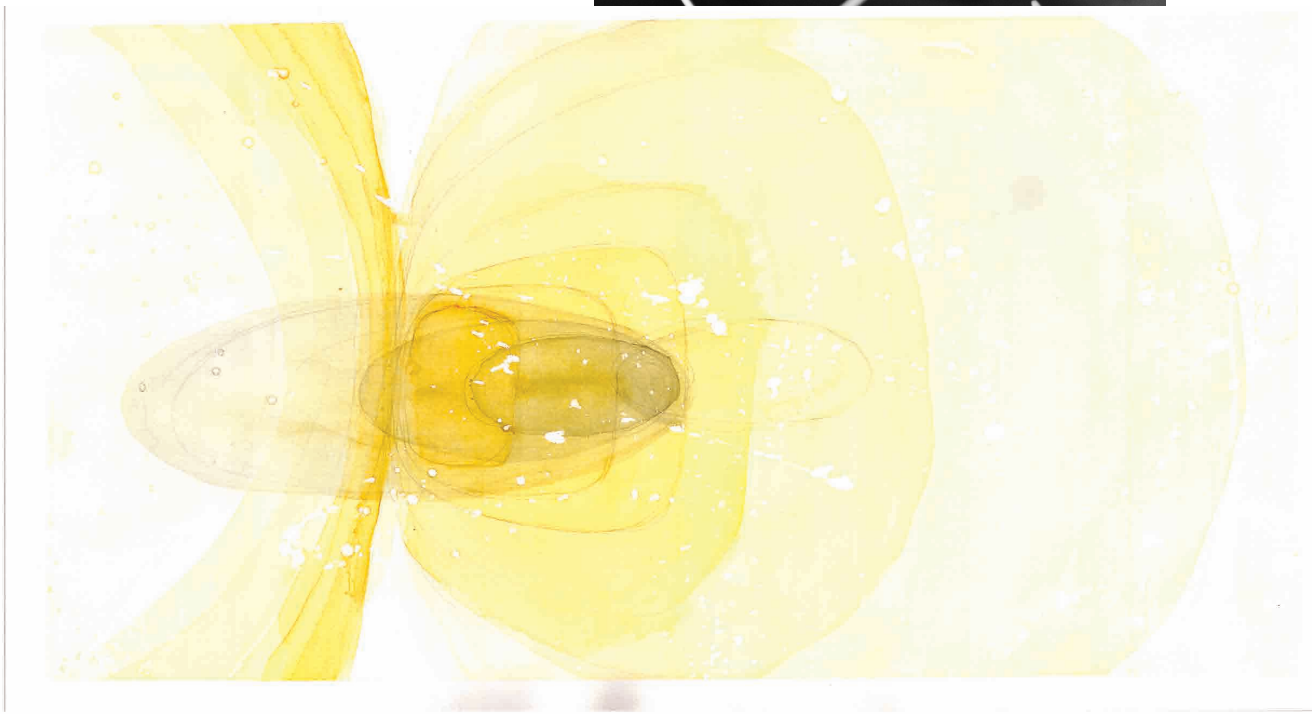
## 1. The echo

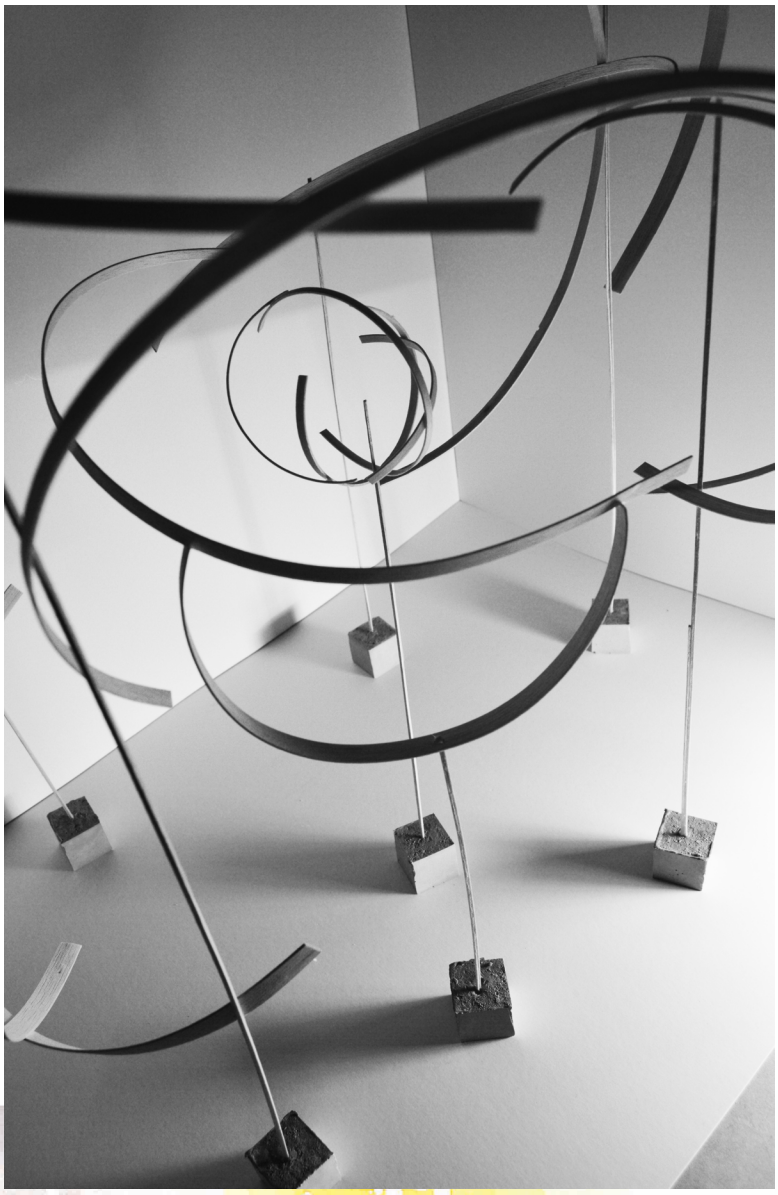
The echo is based on the idea of repetition of fundamental ways of dwelling throughout history and how these are at the core of meaning in architecture. These ways of dwelling are the core of the echo, moving outward through history. Like the sounds of an echo changes as it moves through space, so architecture changes as it moves through time and constant reinterpretation. Therefore, contemporary architecture appears to be different from historic architecture, yet still contains the essence of the fundamental ways of dwelling.



## Critical reflection:

This concept is a sensitive approach, indicating the importance of listening to the existing heritage building and context. The drawing is also based on the site, recognizing the courtyard and tower as important typologies. The specific implication of this concept on architectural form, however, is not clear.





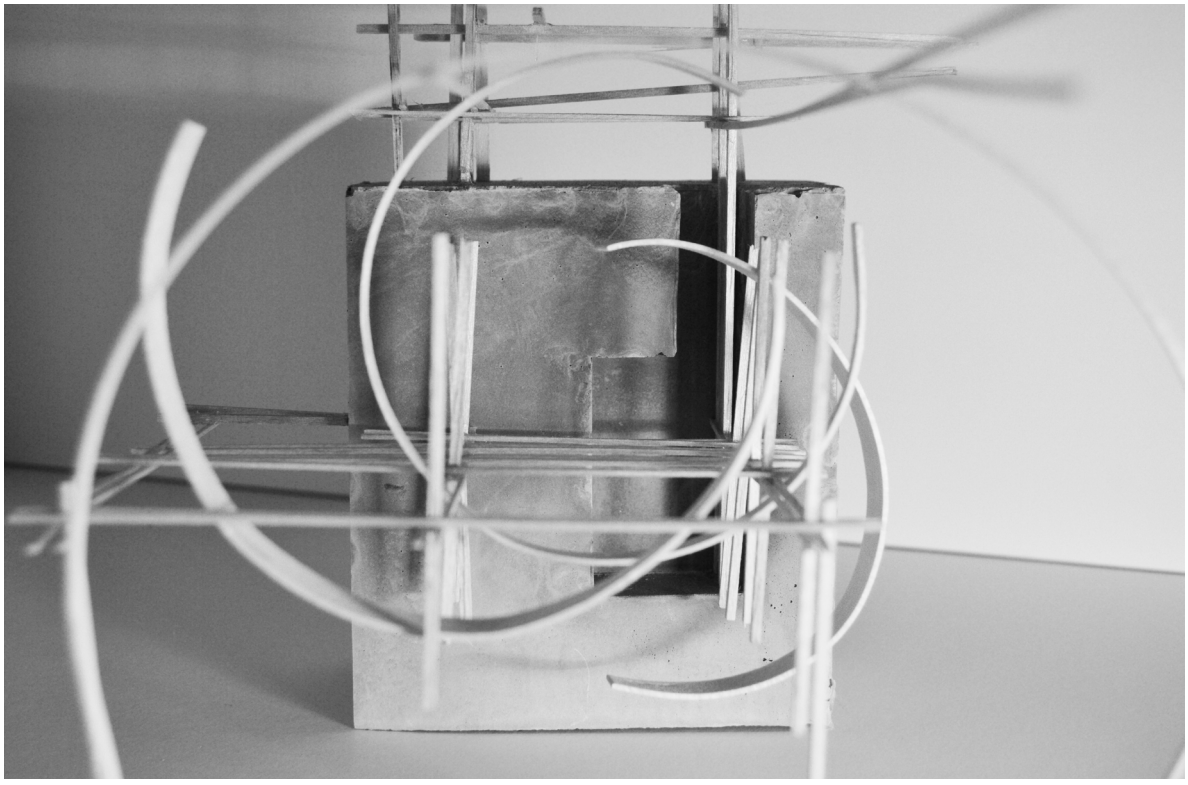
## 2. Underground transformation

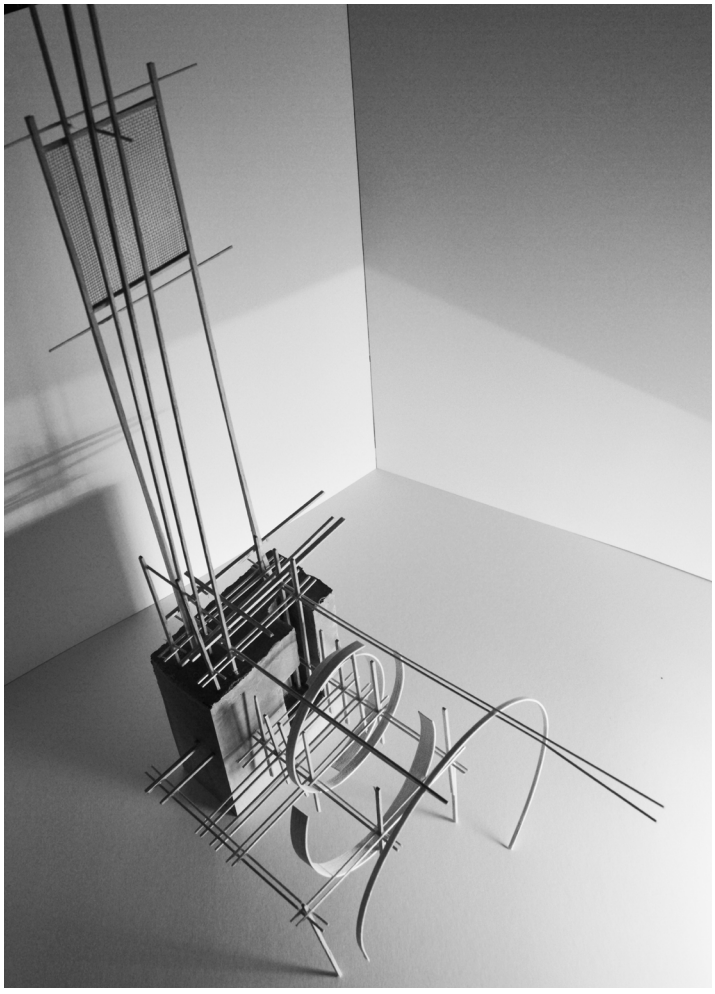
In this concept, transformation happens below the surface and does not impose on the existing. The concrete base represents the ground and the curving balsa structure transforms from an ordered structure above ground to a more dynamic structure underground, where it is not visually imposing. This is a sensitive approach.

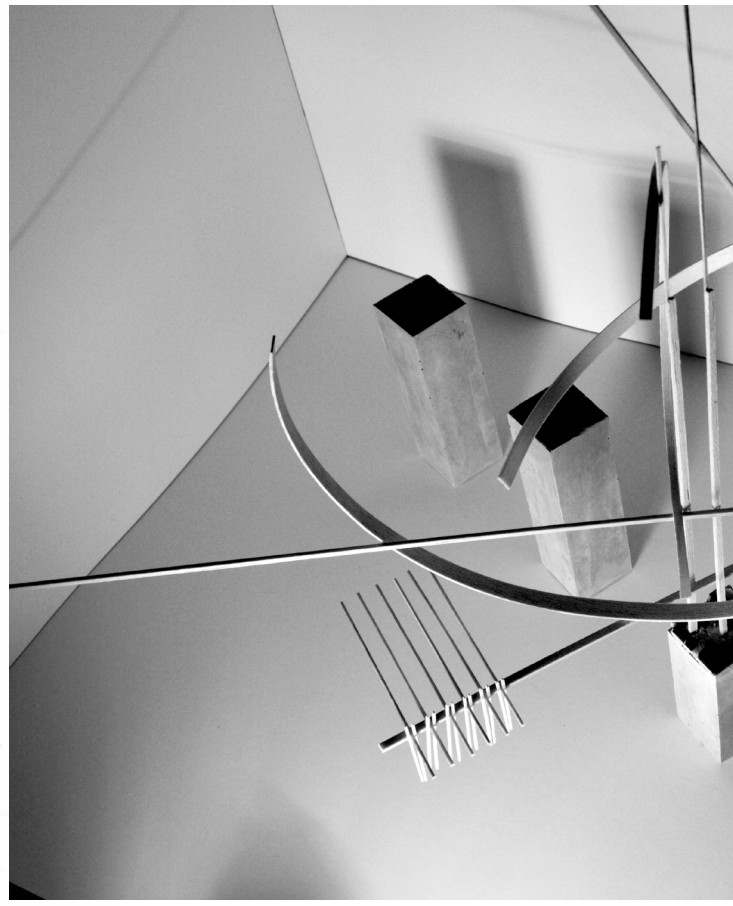
## Critical reflection:

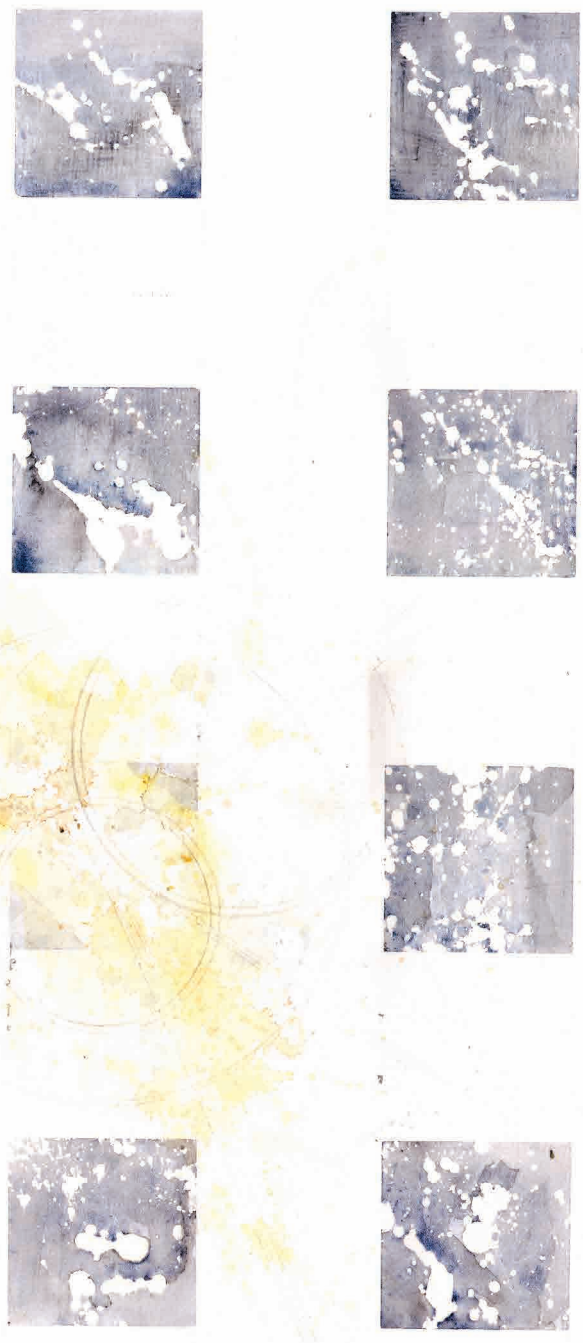
Introducing the possibility of building underground is valuable, but perhaps overly sensitive. The connection between old and new is not strong and does not truly reveal anything new. This concept could be taken further and surface at another point, where the transformed part can be revealed.









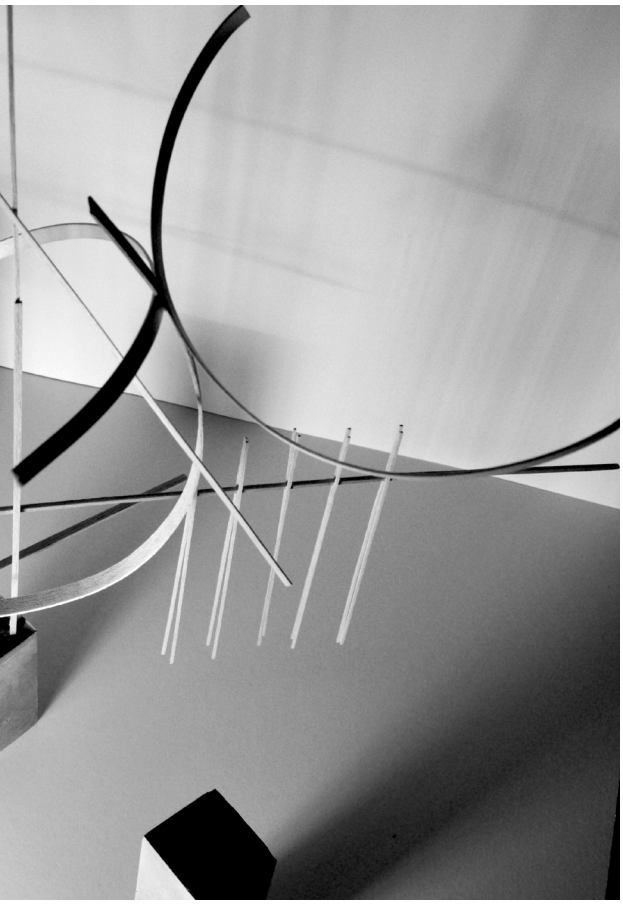


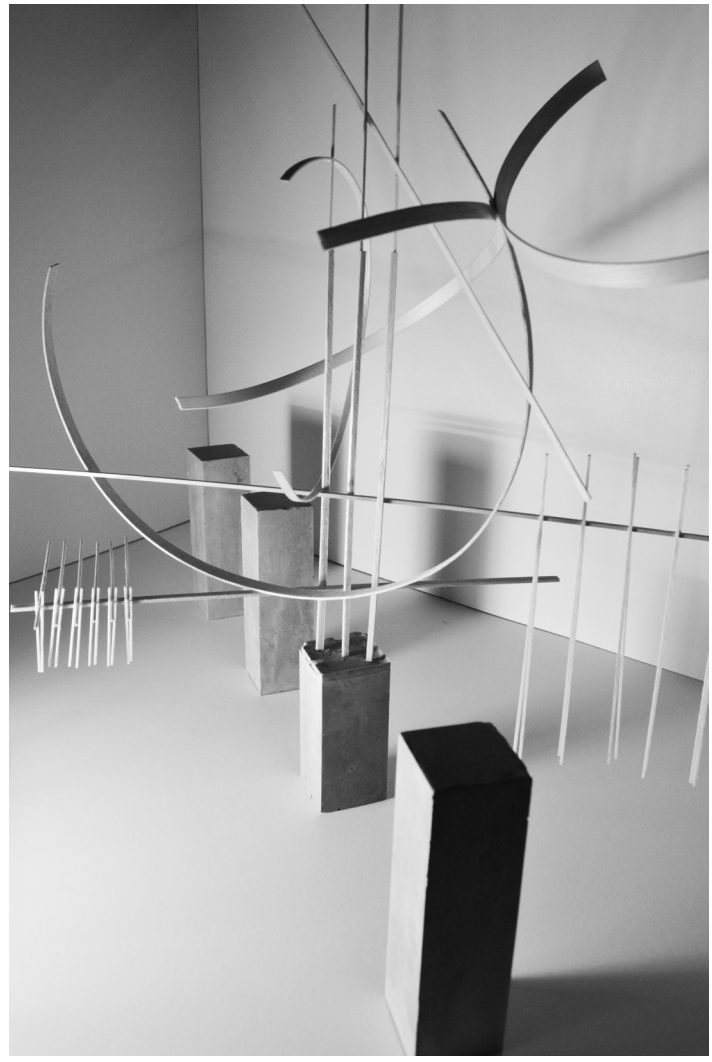
## 3. Anti-tautology

Tautology is the unnecessary use of two words with the same meaning. In this concept, the President Brand Street Conservation Area is interpreted as an example of this (the same style, materials and form can be identified in the Fourth Raadsaal, City Hall, Appeal Court, Old Government Building, etc.). Each public building says the same thing about public institutions, which is unnecessary repetition. As a result, the public institutions no longer relate to the contemporary public. Spaces that were once important public space, now remain unused. This concept therefore proposes an ani-tautological approach as a way of breaking through the stigmatism of the strip of public institutions. To demonstrate this, the third model in the series in completely different in form, scale and material.

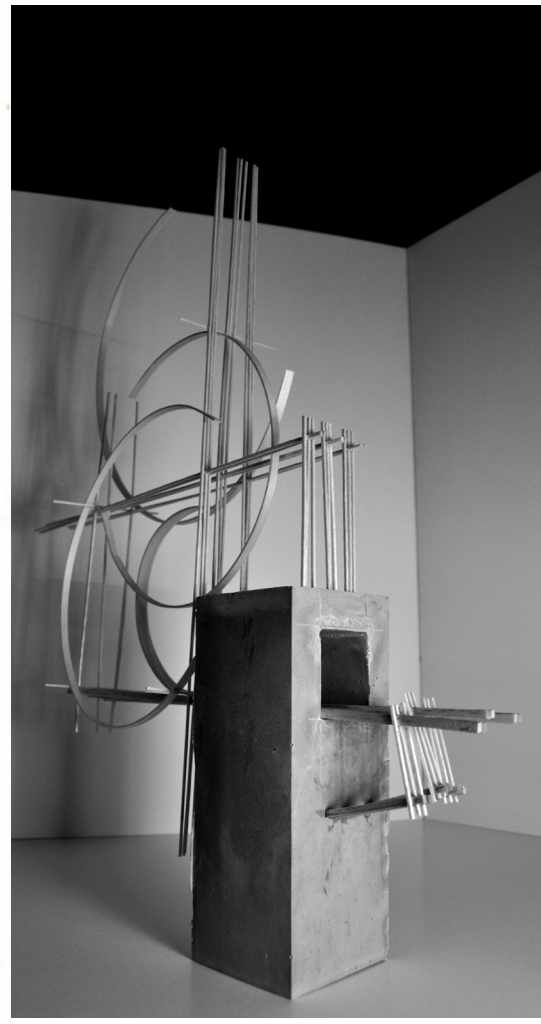
## Critical reflection:

In this case, the approach is very aggressive and lacks consideration for the existing. It is also an additional architectural form that is attached to the heritage building, rather than transforming the existing form of the heritage building. It does, however, highlight that the new cannot copy an architectural style and that there is a need to address the disjunction between the public and public buildings.







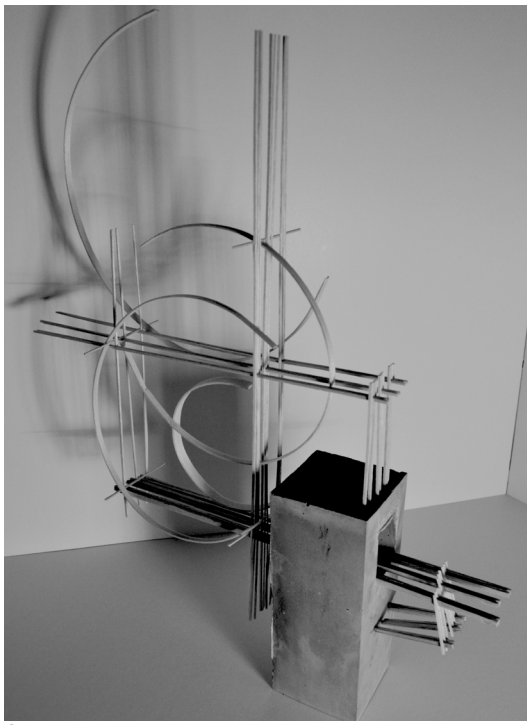


# 4. Transforming the root

Most words are structured around a root word. Contained within this root is the primary meaning of the word, which is transformed by the parts that are attached to the root. Thus, the root is transformed without losing its essence. In this conceptual mode, the root is represented by the concrete form and the attaching units, by the balsa structures. As the root, the existing building contains the meaning which must be conveyed. The new intervention is the lightweight attachment that transforms the root without overpowering it. It uses the meaning of the root to say something new.

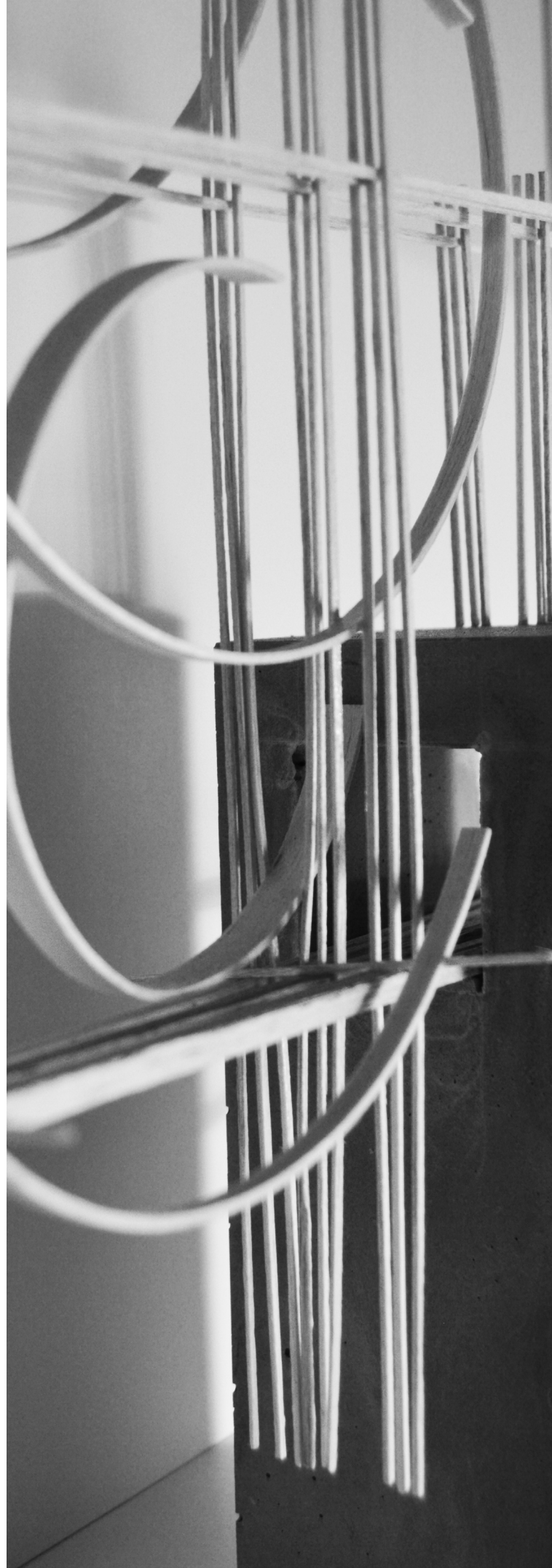
## Critical reflection:

This approach can once again be criticised for becoming an additional architectural form, that is attached to the heritage building, rather than transforming the existing form of the heritage building. What is valuable is the interesting relationship between the heavy solidity of the root/existing building and the sensitivity of the new. The way the new sits in the old has been well articulated by the space that is left within the old.



## Summary:

Through this exploration it becomes clear that there is not one ideal approach. Rather there are valuable ideas, revealed through each concept and a combination of these might result in a more holistic conceptual approach. This investigation formed part of the conceptual framework.



# 2.3 Conceptual framework

## Lessons from the touchstone:
## *Transformasie*

- The old is transformed into something new, not something new is imposed on the old.
- This transformation is a change in form, revealing what is personal, internal, even intimate to those who were unaware of it.
- Through this transformation the expansion of NALN will inspire a new appreciation of heritage.

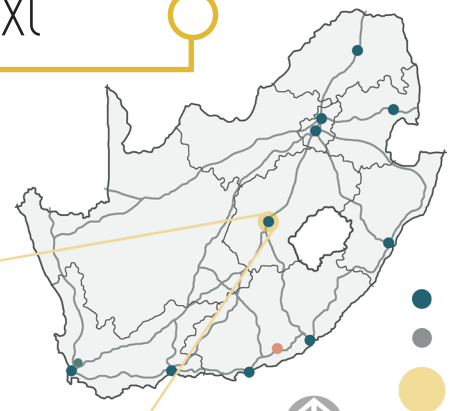
## Lessons from formative conceptual idea exploration:

- There is meaning within the existing typologies, which is understood by *listening* to the existing.
- Working underground brings an interesting perspective, but there should be a connecting between above and below, old and new.
- Meaningless tautology should be avoided, but the relationship between the old and new should not be so disjointed that the one thing becomes two things.
- Although the intervention remains a transforming one, a contrast in structure will lead to an interesting differentiation between old and new. The connection between these two structures will determine the success of this application.

# 2.4 Topology

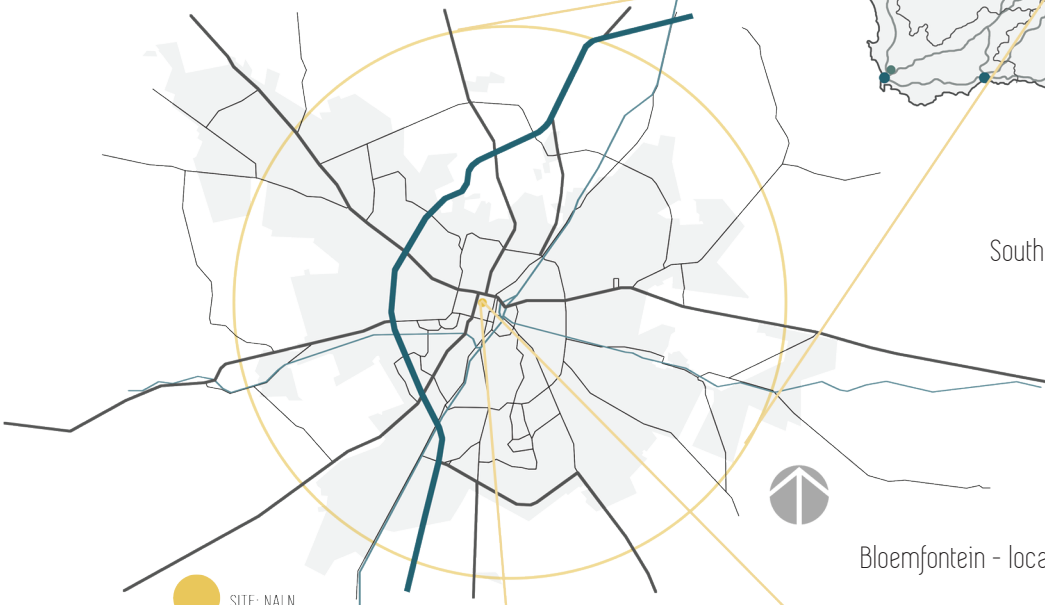
The following topological investigation is a quantitative and qualitative analysis of the site. This includes looking at the broader context of the site, such as Bloemfontein's CBD area and the historic development of the heritage building itself. The purpose of this investigation is the gain an understanding of the voice of the place, so that the proposed design can be an appropriate response. Before the dialogue between the new additions and the heritage building can begin, the dialogue between the site and its context should be understood.

# 2.4.1 Macro context



major cities
major roads
SITE: NALN, Bloemfontein
NELM, Grahamstown
Afrikaans Language Monument, Paarl

South Africa - location



Bloemfontein - location

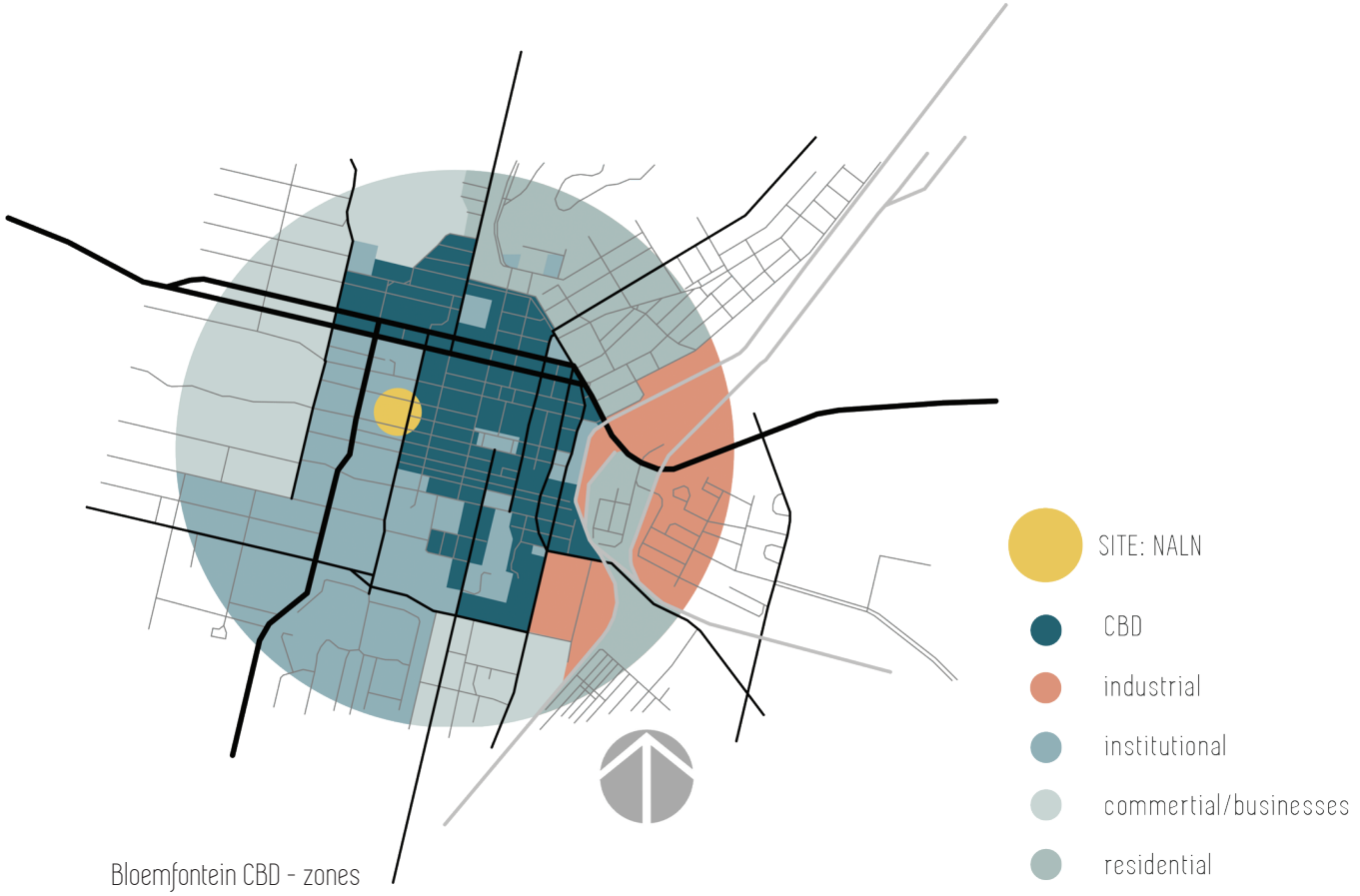
SITE: NALN
N1 highway
secondary highways
major city roadways
railway
city outline



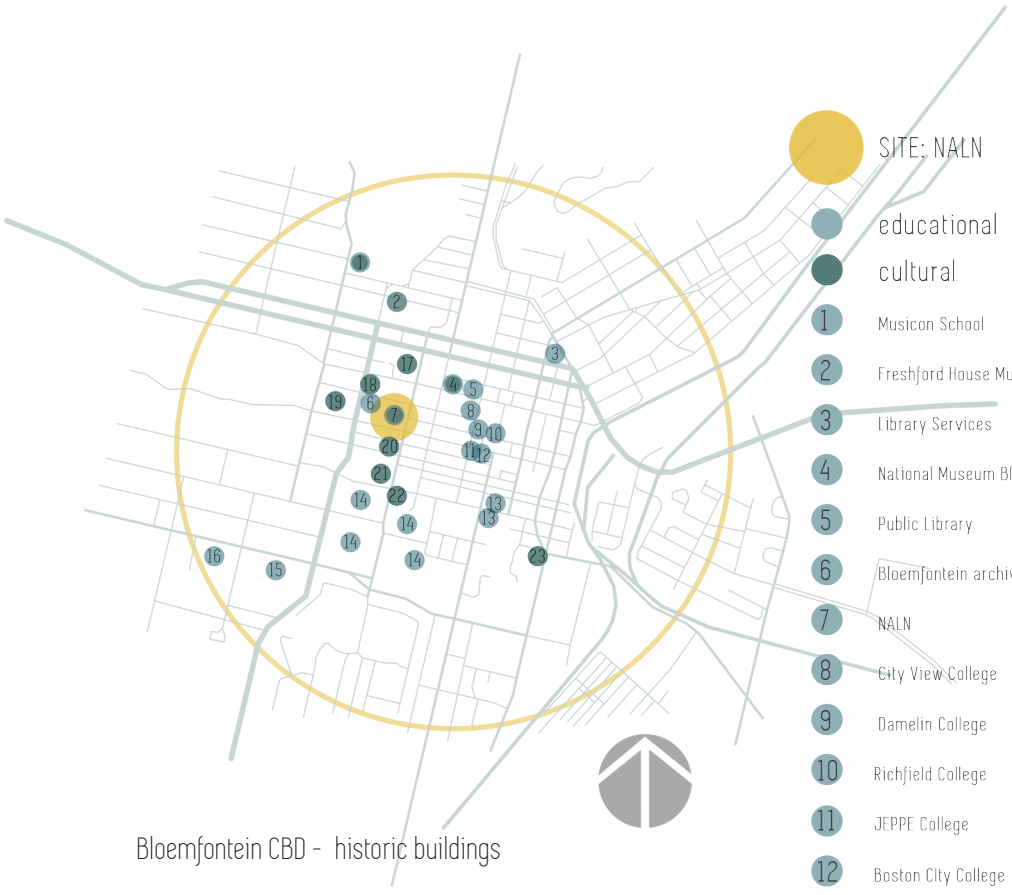
Bloemfontein CBD - location




Bloemfontein CBD - functions




Bloemfontein CBD - zones



Bloemfontein CBD - historic buildings

SITE: NALN

educational

cultural

1 Musicon School
2 Freshford House Museum
3 Library Services
4 National Museum Bloemfontein
5 Public Library
6 Bloemfontein archives
7 NALN
8 City View College
9 Damelin College
10 Richfield College
11 JEPPE College
12 Boston City College
13 Motheo TVET College
14 Central University of Technology
15 HTS Louis Botha School
16 Roseview Pirmary School
17 City Hall
18 Civic Theatre
19 Sand Du Plessis Theatre & PACOFS
20 Fire Station Museum
21 Old Presidency Museum
22 Eerste Raadsaal Museum
23 Wesleyan Church Museum



Bloemfontein CBD - roads

SITE: NALN

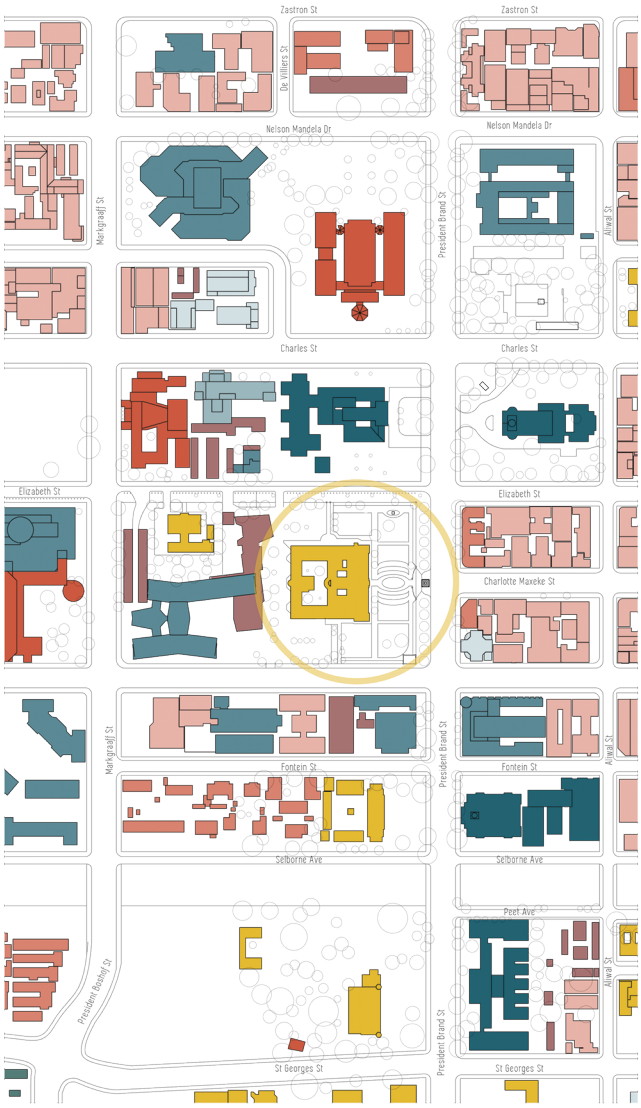
1 Arthur Nathan Swimming Pool
2 Freshford House
3 Ramblers Club
4 President Brand Street Conservation Area
5 City Hall
6 Fichardt House
7 Supreme Court of Appeal
8 Fourth Raadsaal
9 Archive Building
10 Old Government Building &Historic Tree Garden
11 Old Presidency
12 Eerste Raadsaal
13 Tweetoring Church
14 Hoffman Square
15 Church Street (renamed)
16 Technical College Main Building
17 Green Lodge
18 Cathdral of St.Andrew & St.Michael
19 Hertzog House
20 Old Fort - military museum
21 Old Railway Bureau
22 Station Building
23 Wesleyan Church
24 Old Prison

2.4.2

# Meso context




Loaction Map




SITE: NALN

build-up space

Density

0 20 50 100 200

SITE: NALN

institutional - judicial

institutional - administrative

institutional - medical

institutional - religious

institutional - police

institutional - educational

institutional - performance

residential

commercial

covered parking

Functions

0 20 50 100 200



SITE: NALN

built - inaccessible

unbuilt - inaccessible

public - inaccessible

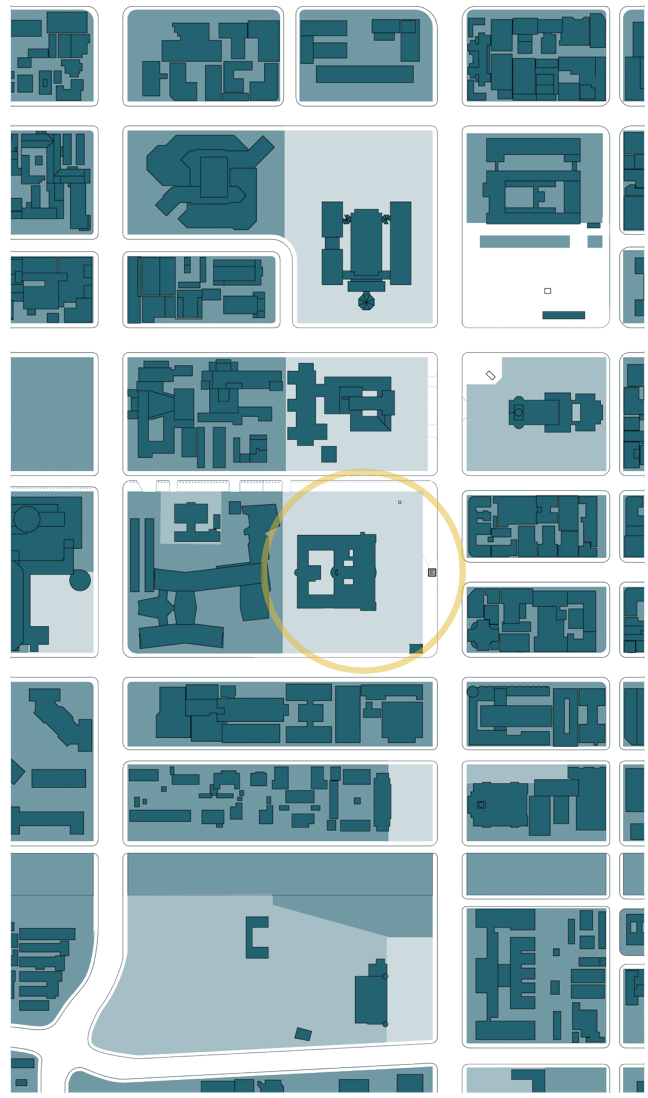
public - unused

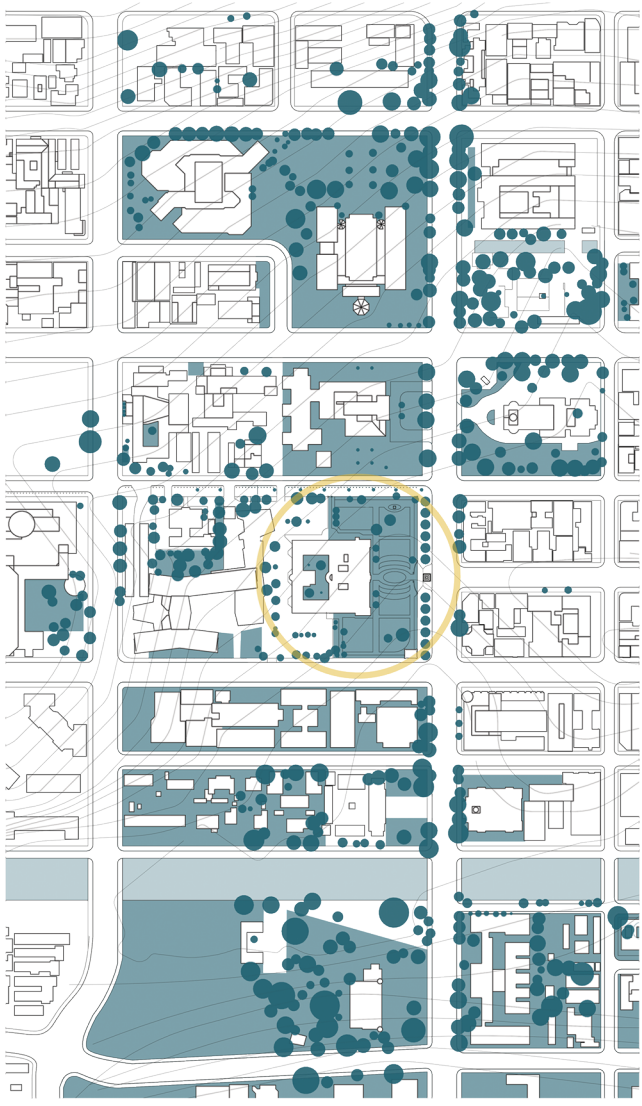
accessible



Accessibility to Public

0 20 50 100 200





SITE: NALN

trees

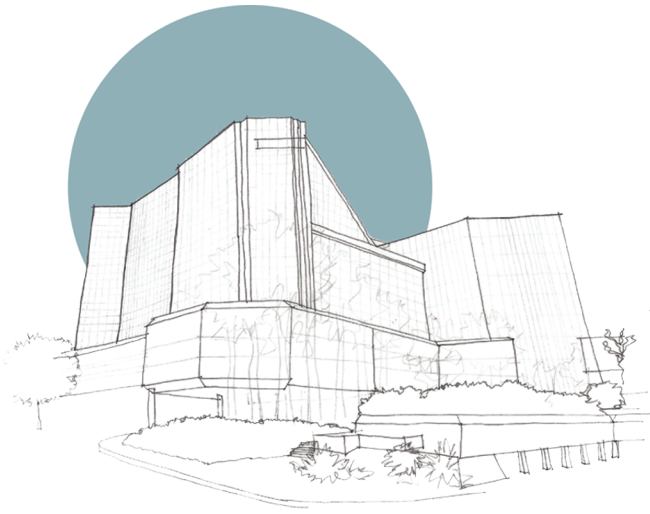
green areas

water

Natural Features



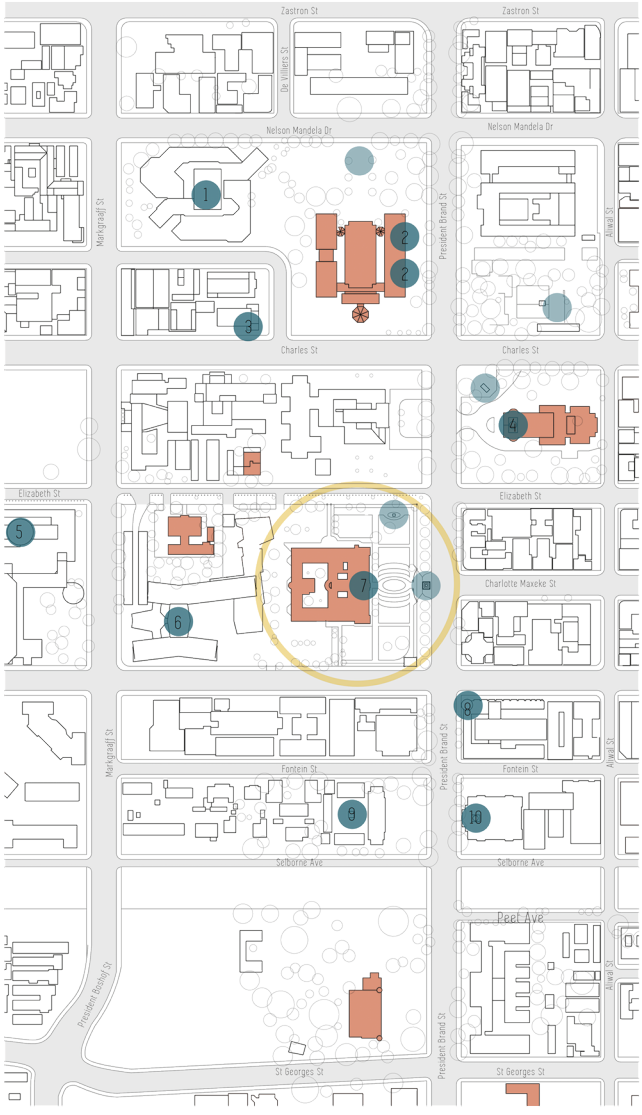
0 20 50 100 200



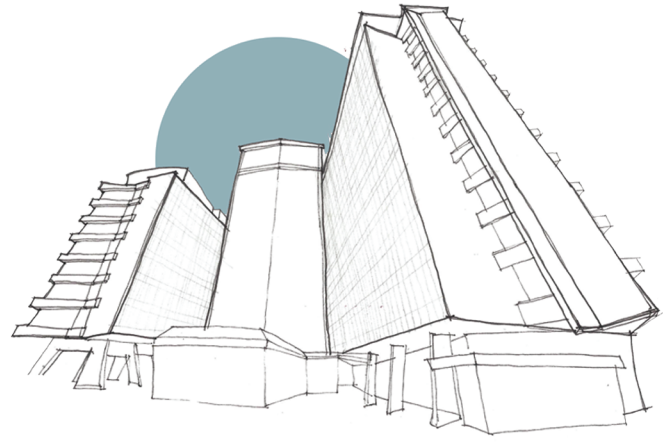
1 - Brahm Fischer Building



2 - City Hall




Points of Interest



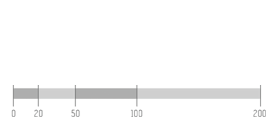
6 - OR Thambo Building

SITE: NALN

towers

statues/memorials

official provincial heritage buildings





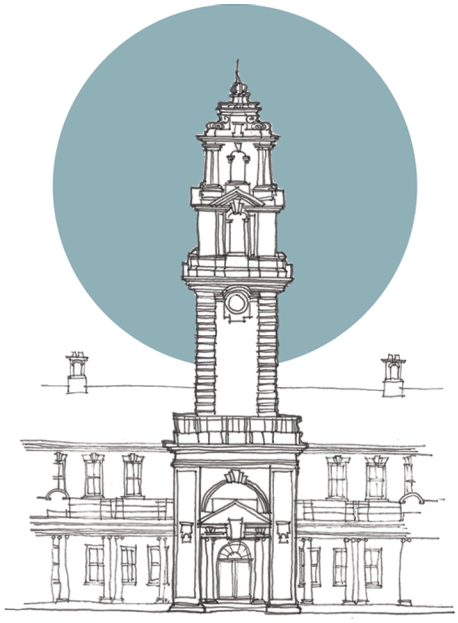
3 - Trinity Methodist Church



4 - Fourth Raadsaal



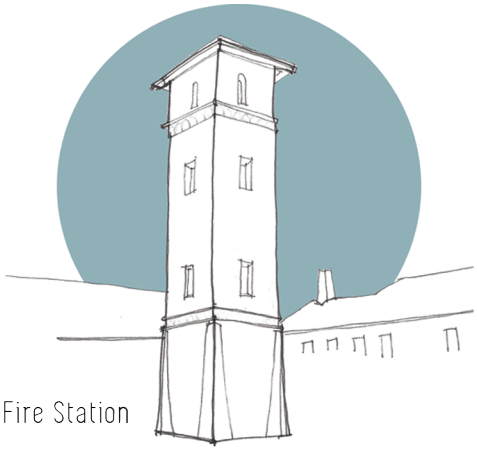
5 - Fidel Castro Building



7 - Old Government Building



8 - Department of Public Works

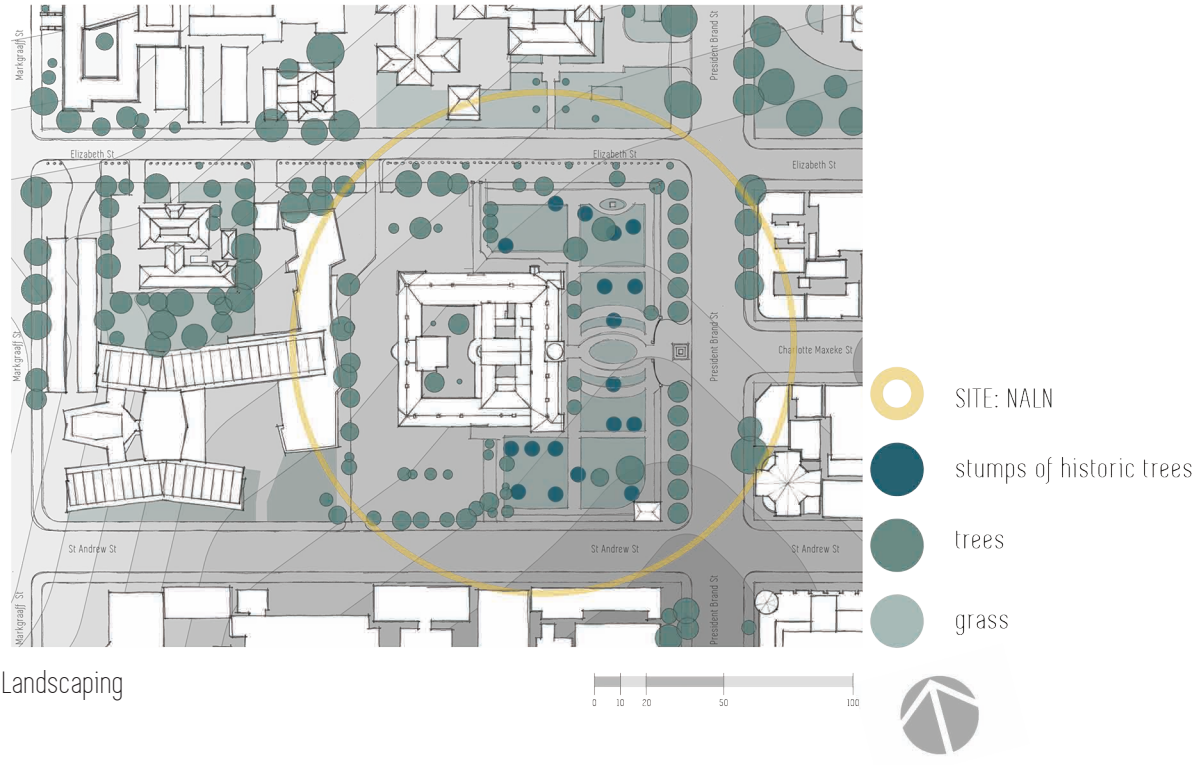


9 - Fire Station

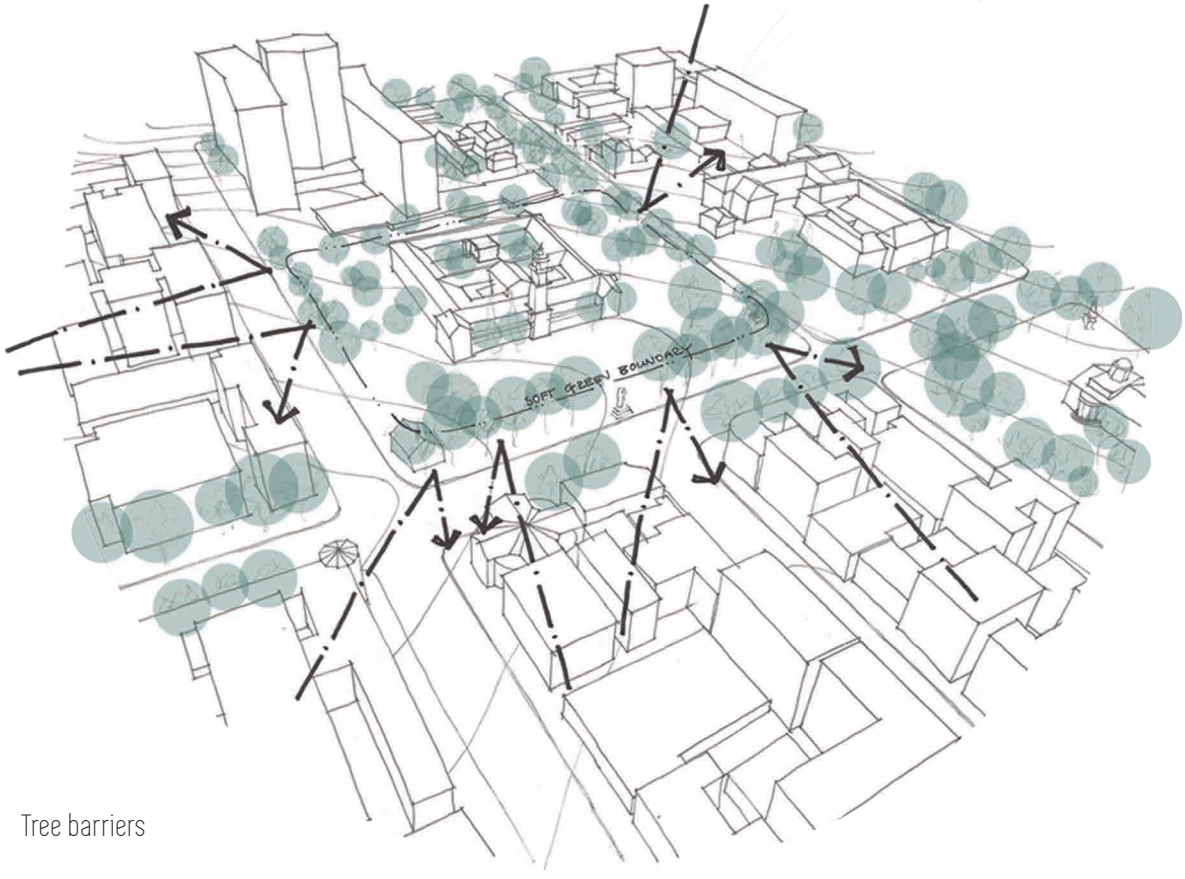


10 - High Court

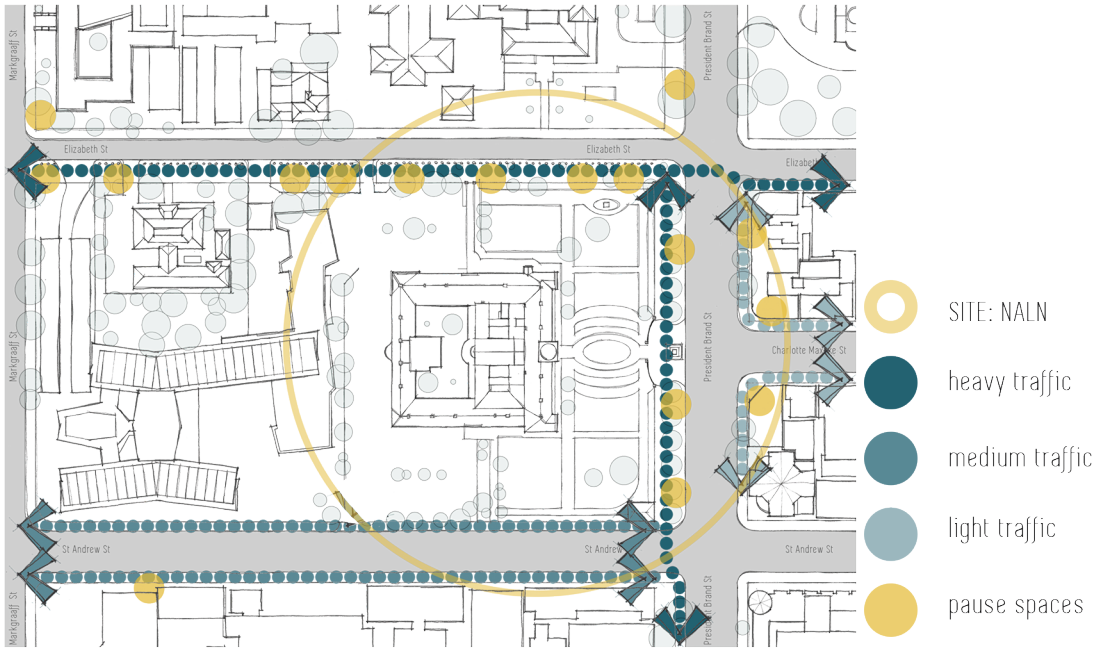
# 2.4.3 Micro context



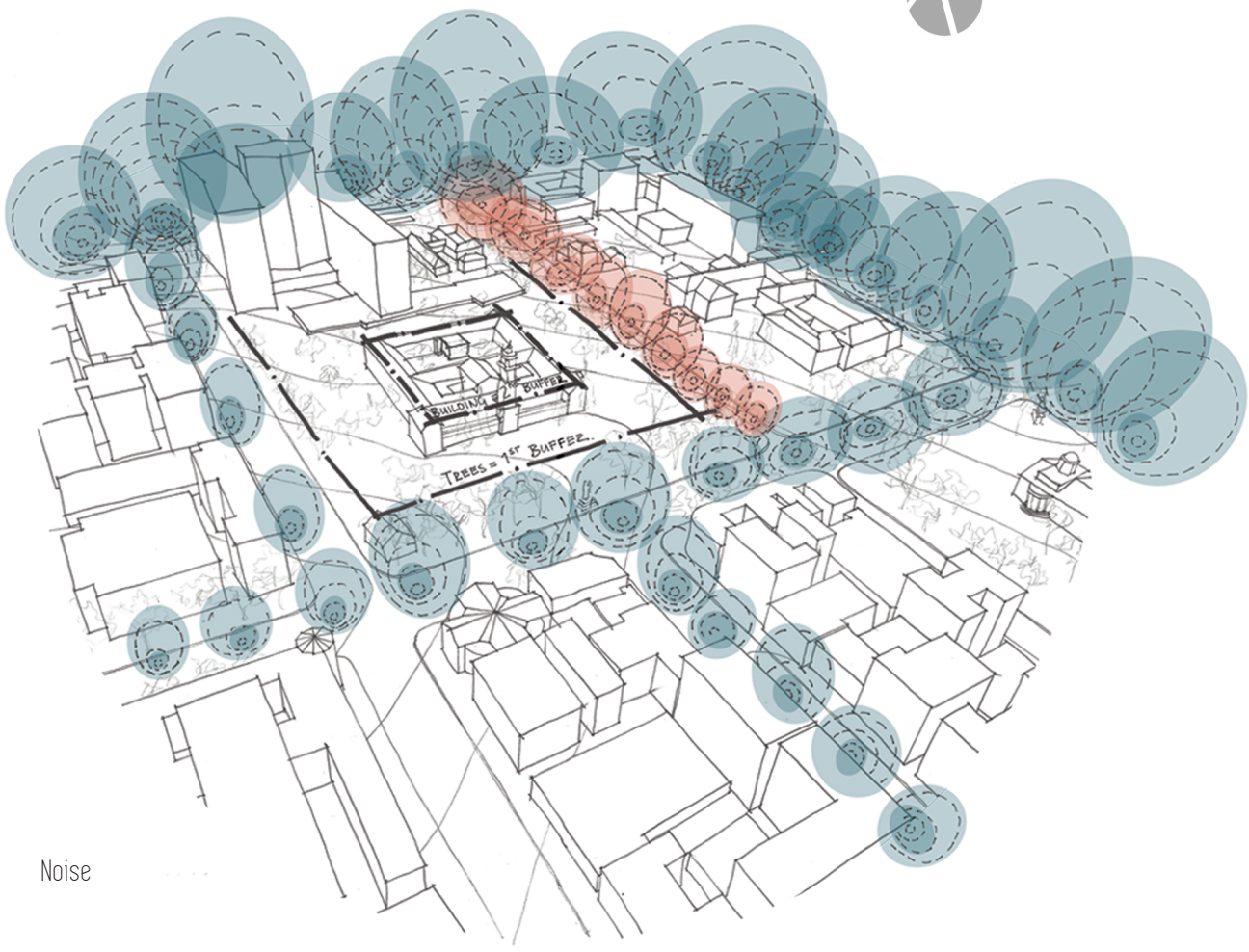

Landscaping



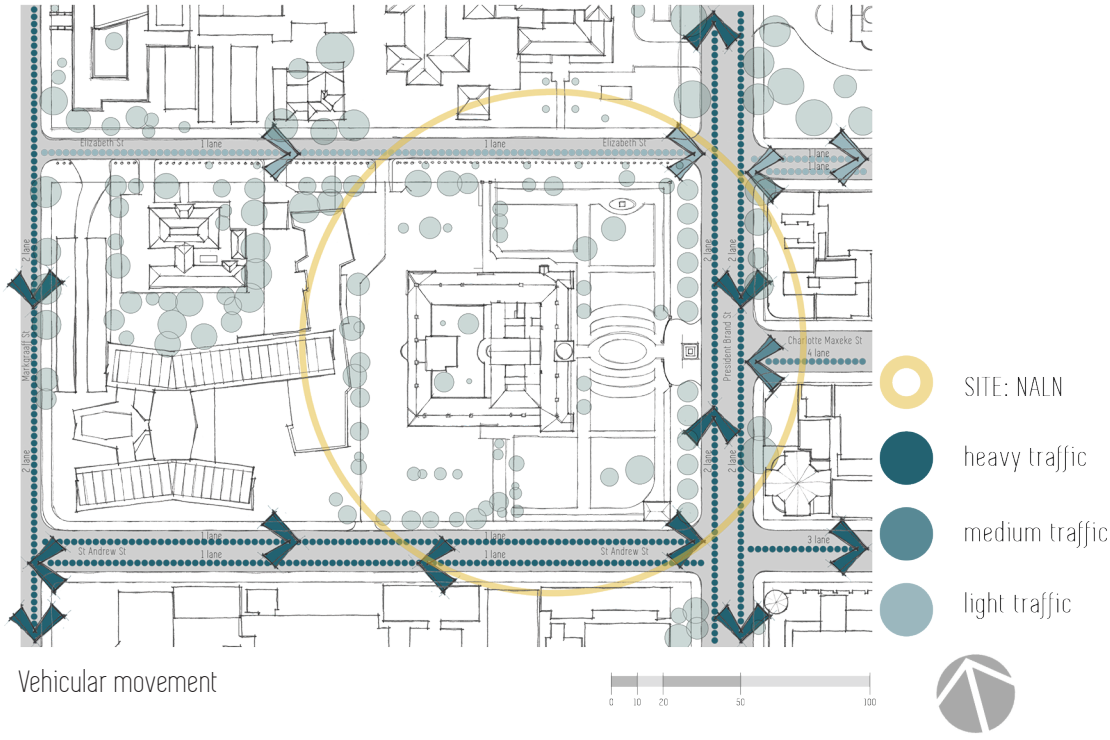

Tree barriers



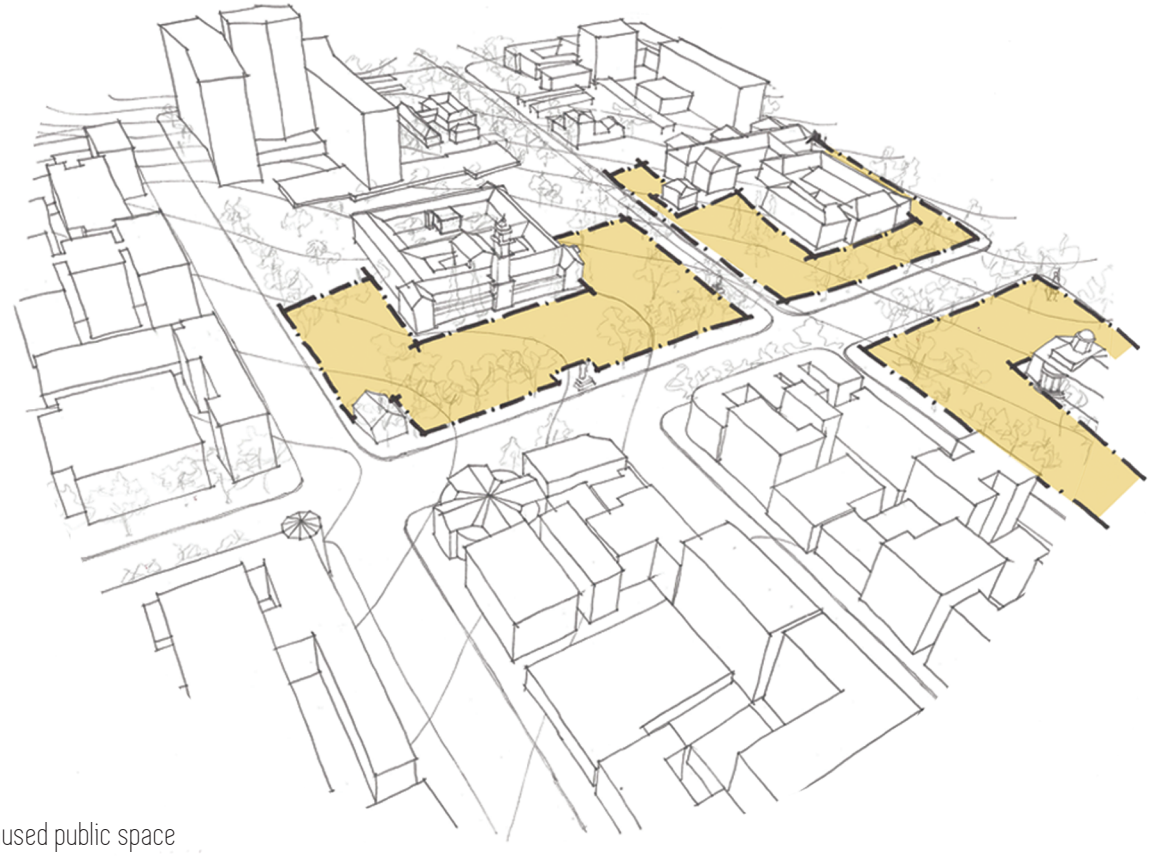

Pedestrian movement



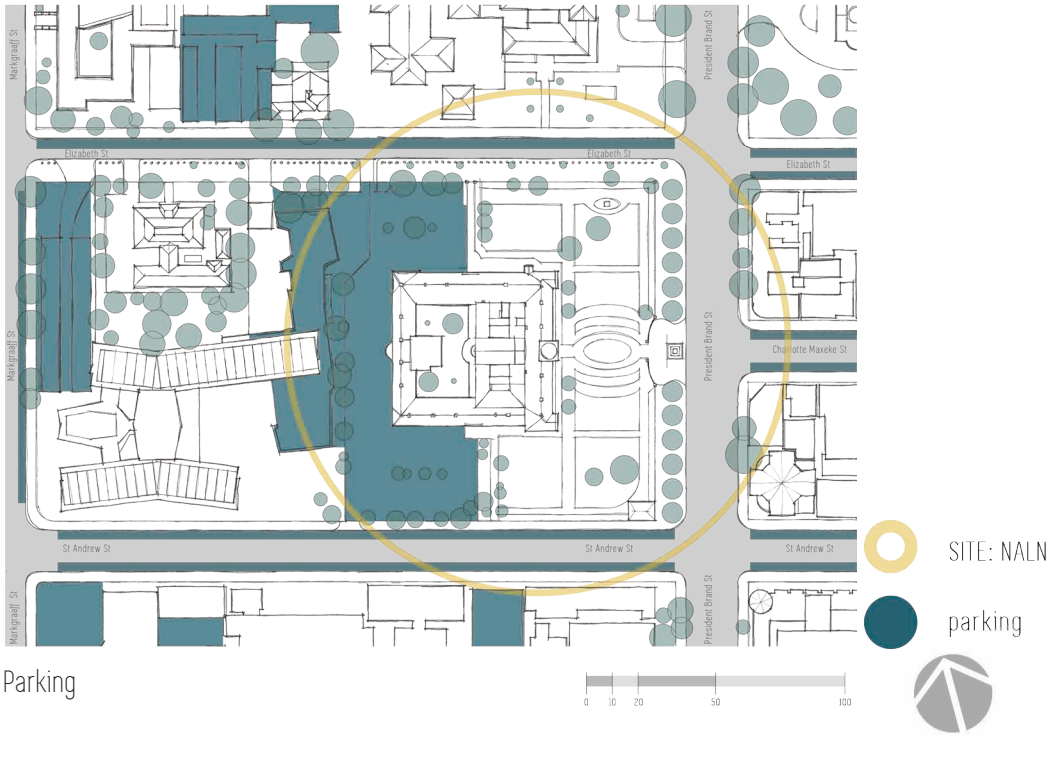

Noise



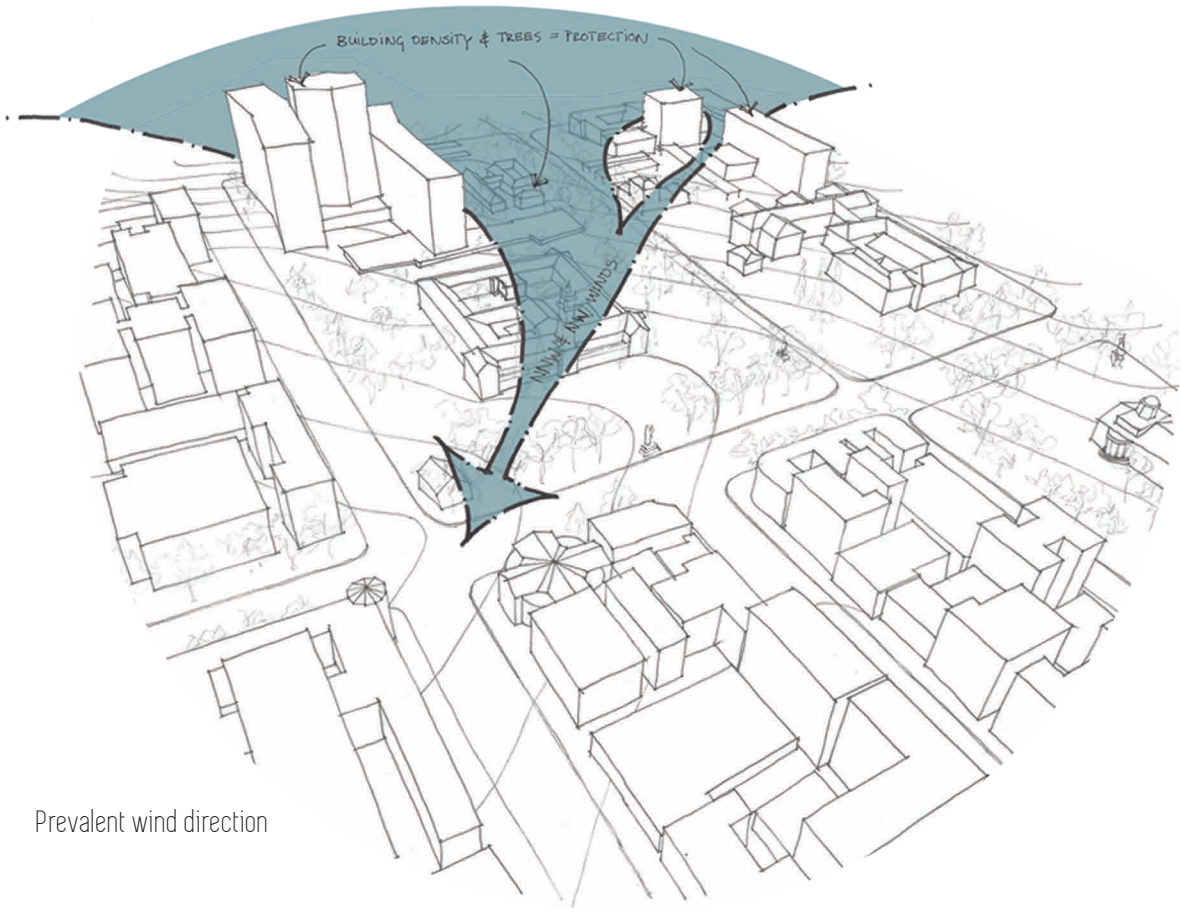

Vehicular movement



Unused public space




Parking




Prevalent wind direction




Urban axis



View down Charlotte Maxeke Street from the Old Government Building balcony

2.4.4

# History as context

## Historic overview of the Old Government Building:

The historic background of the site is an important part of the context, especially when heritage is involved. The Old Government Building and its site has had an interesting past. The architecture went through various phases of development and the role of the building within the narrative of Bloemfontein evolved. Unpacking this historic narrative provides a deeper understanding of the voice of the place and what an appropriate design response could be.

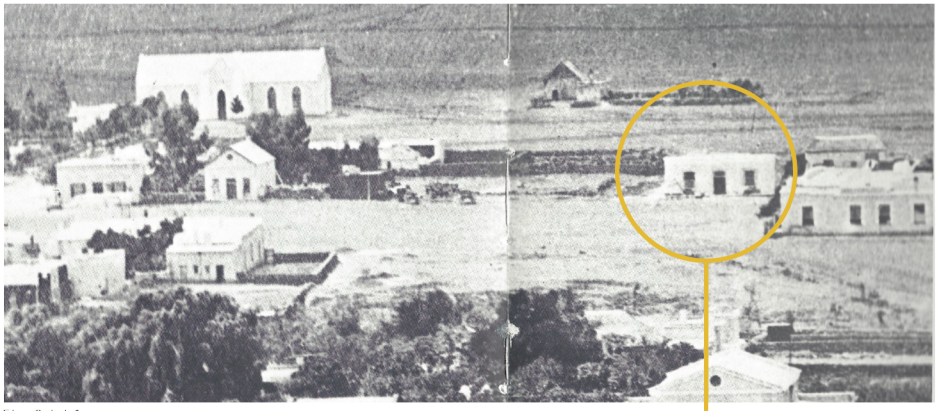


Fig. 2.4.4.1
Hamilton. 1866. *View of Hoffman Square with what was formerly Paddington's Shop and the Second Raadsaal*. Photograph (Schoeman, K. 1980: figure 18).

Phase 01

1849 — Construction of a school building in St. George Street, later becomes the First Raadsaal of the *Vrystaatse Volksraad* (today the First Raadsaal Museum) (Schoeman, 1980: 24).

1854 — Independence of the Orange Free State as a Boer Republic – shortage of offices for government (Botes, 1991: 143).

1856 — Shop of Henry Paddison on Hoffman Square hired for use as Second Raadsaal and Government Offices (Schoeman, 1980: 24).

1871 — President Brand recommends the commission of a bigger, more accessible building for the Volksraadsittings. (Botes, 1991: 143).

1872 — Approval of plans for new governmental offices by R.C.G.A.T. Wocke (Botes, 1991: 143).

June 1874 — Final decision to build the new building on current site (Botes, 1991: 143).

September 1874 — *De Tijd* reports the ground-breaking of the building project (Botes, 1991: 143-144).

At the time this site was in an open, undeveloped area on the outskirts of the settlement. This raised concern with some members of the *Bloemfontein Volksraad*. The proposed new tower and axis was seen as a solution for the disconnected site. (Schoeman, 1980: 66).



Fig. 2.4.4.2
Unknown. 1877. *The New Government Building in 1877, with one-story and a "wanstaltige" tower.* Photograph (Schoeman, K. 1980: figure 30).

## Different opinions of the building:

"W. Littleton het dit só beskryf: 'A large and handsome but plain square block of building…'" (Botes, 1991: 146).

"lacks dignity and their interior (lacks) a pail of whitewash.'" (Botes, 1991: 146).

However, the people of Bloemfontein where very proud of the new Government Building, especially its clocktower (Schoeman, 1980: 67). "Hoewel nie juis mooi nie, was die gebou met sy hoë toring 'n soliede indrukwekkende gesig waar bokant die huis en bome van die dorp uitgetroon en die uitsig langs Maitlandstraat treffend afgesluit het." (Botes, 1991: 146).

**31 May 1875**

President Brand lays cornerstone, following a procession down Maitland Street. (Schoeman, 1980: 67).

This was followed by the inauguration of the new Third Raadsaal behind the tower.

**July 1876**

Public 'takes ownership' and engages with building through this contribution

*Handing over of large clock for instillation in the tower. The fundraising for this clock was organized by the ladies of Bloemfontein. (Botes, 1991: 145).*

Completion of the entire building.
Description:
- Red corrugated roof
- Simple construction with two wings
- E-shaped single-story structure
- Veranda with wood columns
- Iron Free State Crest over main entrance
- 21 meter square tower with a steep roof and flagpole on top and clock inside
- Stone flooring in hallways
- White-washed interior walls
- Louvres on outside windows
- Stone wall around site with ironwork gates – later ironmongery is added to the front and side boundaries of the site
- Garden/ park in front where dignitaries planted trees throughout the years

(Botes, 1991: 145).

**May 1877**

Procession:
Public takes pride in the new building.
"*Die Staatspresident en die Goewermentsekretaris het in 'n rytuig aangekom, en die ander mense te voet. Dit het dié dag gereën en die mense met hulle sambrele het 'n kleurvolle prosessie gevorm. Tydens die optog het die artillerie-orkes opgewekte marsmusiekgespeel… Dit het 'n vrolike prentjie geskep.*" (Botes, 1991: 144).

Third Raadsaal:
*The Express* describes the new Raadsaal as beautiful, light and airy with an elegant wood ceiling. *The Friend* reported that it possesses no exceptional beauty but was spacious and functional. (Botes, 1991: 145).



Fig. 2.4.4.4
Photographer of the Friend. s.d. *President Brand Statue as it was originally placed.* Clipping (Free State Provincial Archives Repository – Collection of the photographer of the Friend Box – A566-449)



Fig. 2.4.4.5
Unknown. s.d. *Building after addition of a second story.* Photograph (NALN – Photograph on display)

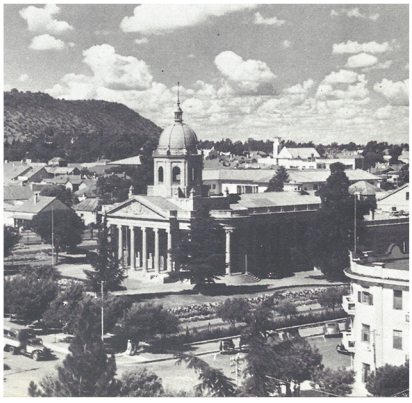
Unveiling of bronze statue of President J.H.Brand (Botes, 1991: 146).

5 July 1893

1893

Meeting of the Vrystaatse Volksraad moved to the Fourth Raadsaal (also in President Brand Street) (Botes, 1991: 146).

Fig. 2.4.4.3
Unknown. s.d. *View of the Fourth Raadsaal, also I President Brand Street.* Photograph (Schoeman, K. 1980:



## Phase 02

Adding the second storey creates a more cohesive scale between building and tower (Botes, 1991: 146).

*Second storey of offices added. Architect: J.E. Vixseboxse (Botes, 1991: 146).*

1895

## Phase 03

*Completion of the new extension by Baker and Masey. Doric column colonnade around the new courtyard and Cape-Dutch inspired gables on the new west elevation. New wing has clay tile roofing, opposed to the existing corrugated sheeting roofing. New basements under extension. (Botes, 1991: 147).*

*Government Garden around the building occupies the entire city block. It includes: tree garden and landscaping, tennis courts, croquet court, clubhouse, small nursery, municipal plantation, groundskeeper house, state's laboratories, seed storeroom, greenhouse, stables, workshops (Botes, 1991: 151).*

1906

April 1902

Sir Herbert Baker (from the form Baker and Masey) proposes sketch plans for two new wings towards the west, situated around a courtyard with a stoep and colonnade. Materials similar to existing building and Fourth Raadsaal i.e. sandstone and red bricks. (Botes, 1991: 146).

Challenges with reconciling the existing single-storey short wings at the back with the new proposal. After investigating the existing structure, Baker recommends the strengthening of these foundations and the rebuilding of these existing walls using a stronger material.
(Botes, 1991: 147).

*Completion of reconstruction:*
*- consists of Vereeniging bricks, Bayswater-sandstone and red Marseilles-tiles (Schoeman, 1980: 193).*
*- joinery done on-site, with a workshop set-up in the third Raadsaal*
*- original veranda on the east replaced by an Ionic column colonnade carrying a balcony with stone balustrade*
*- new stonework and brickwork on the east façade*
*- new tower is slimmer and 10.5 meters higher with a sandstone British crown on top*
*- new clock with four faces in the tower*
*- improved construction techniques: firewalls, steel window frames, concrete or stone floors, steel or reinforced concrete ceilings, fire-proof safes and fire doors, concrete Doric columns in the courtyard, fire-safe hallways*
*- installation of electric lighting and bel system*
*- basements used as storage/archive (Botes, 1991: 149-150).*

*The Friend describes the new building as "'modern Renaissance' with classical elements, such as the colonnade, columns and pediment" (Botes, 1991: 149 -150).*

Large fire damages most of the building, started by an electrical problem in the attic (Botes, 1991: 147).

*Reconstruction of the building based on Baker and Masey design.*
*F. Taylor makes changes to the east elevation and tower. (Botes, 1991: 149).*

President Brand statue moved back to make way for tram lines (Botes, 1991: 151).

Trees, shrubs and other plants in front of the building is replaced by a lawn, a Baroque inspired flowerbed layout and shrubs and trees to the sides. The historic trees were left as is, to be replaced by a more appropriate species when they die. New entrances on either side of the statue (Botes, 1991: 151 -152).

28 October 1908 — October 1909 — 1911 — 1915 — 1930

Phase 04



Fig. 2.4.4.6 Unknown. 1908. *Government Building fire.* Photograph. (Schoeman, K. 1980: figure 127).



Fig. 2.4.4.7
Unknown. 1983. *Development behind the Old Government Building impotsing on the historic vista down Maitland Street.* Sketch (Free State Provincial Archives Repository – Collection of the photographer of the Friend Box – A566-439).

## Phase 05

**1950-1960**
Government hires additional office space throughout the city (Botes, 1991: 153).

**1969**
Completion of the H.F. Verwoerd Building (O.R. Tambo building) –administration departments move here, and the building becomes known as the Old Government Building (Botes, 1991: 153).

**21 April 1972**
The Old Government Building, including its site and boundary walls, declared a National Heritage Site (Botes, 1991: 152).

**2 January 1970**
Official opening of NALN (Botes, 1991: 153).

*Geesteswetenskaplike Navorsing* (RGN) starts the Documentation Centre in the Old Government Building – evolves into the National Afrikaans Literature Museum and Research Centre (NALN) (Botes, 1991: 153).

**24 March 1973**

**1973**
*Redevelopment of the Tree Garden and introduction of bust statues of famous Afrikaans writers and a statue of President F.W. Reitz (Botes, 1991: 153-154).*

"'n Atmosfeer van 'n rustige tuin is te midde van die stadsgewoel voor die Ou Goewermentsgebou geskep." *(Botes, 1991: 154).*

**25 November 1988**
President Brand Street declared a Conservation Area (Botes, 1991: 156).

**1990**
Restoration of the building, particularly the sandstone work and the tower. Architects: Gordon, Verhoef and Krause (Botes, 1991: 154).

**2010**
Completion of restoration and alterations by Roodt Architects (Roodt Architects, s.d.: online)

# 2.4.5 Conservation strategy

## 2.4.5.1 The National Heritage Resources Act nr 25, 1999

The Heritage Act protects national heritage resources. It provides policy for their management and authorises the South African Heritage Resources Agency and its councils. The Free State Provincial Heritage Resources Authority is the local council of SAHRA and must issue a permit for any alterations or demolitions necessary for this intervention (South Africa, 1999: 58). Application for this permit includes a heritage resource assessment.

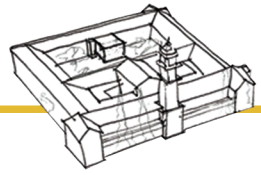
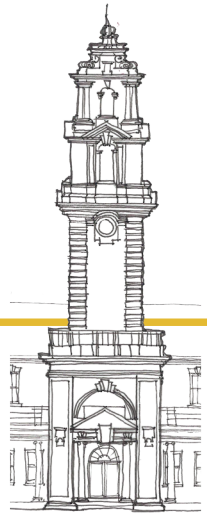
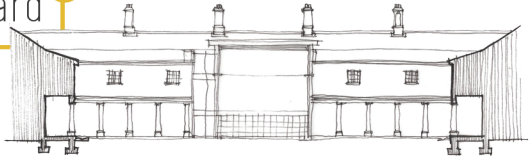
President Brand Street is listed as a Conservation area and Heritage Area (protected in terms of section 31 of the NHRA). The Old Government Building and Historic tree-garden are listed as National monuments and Provincial Heritage Sites, Grade II (South African Heritage Resources Information System, s.d.: online).

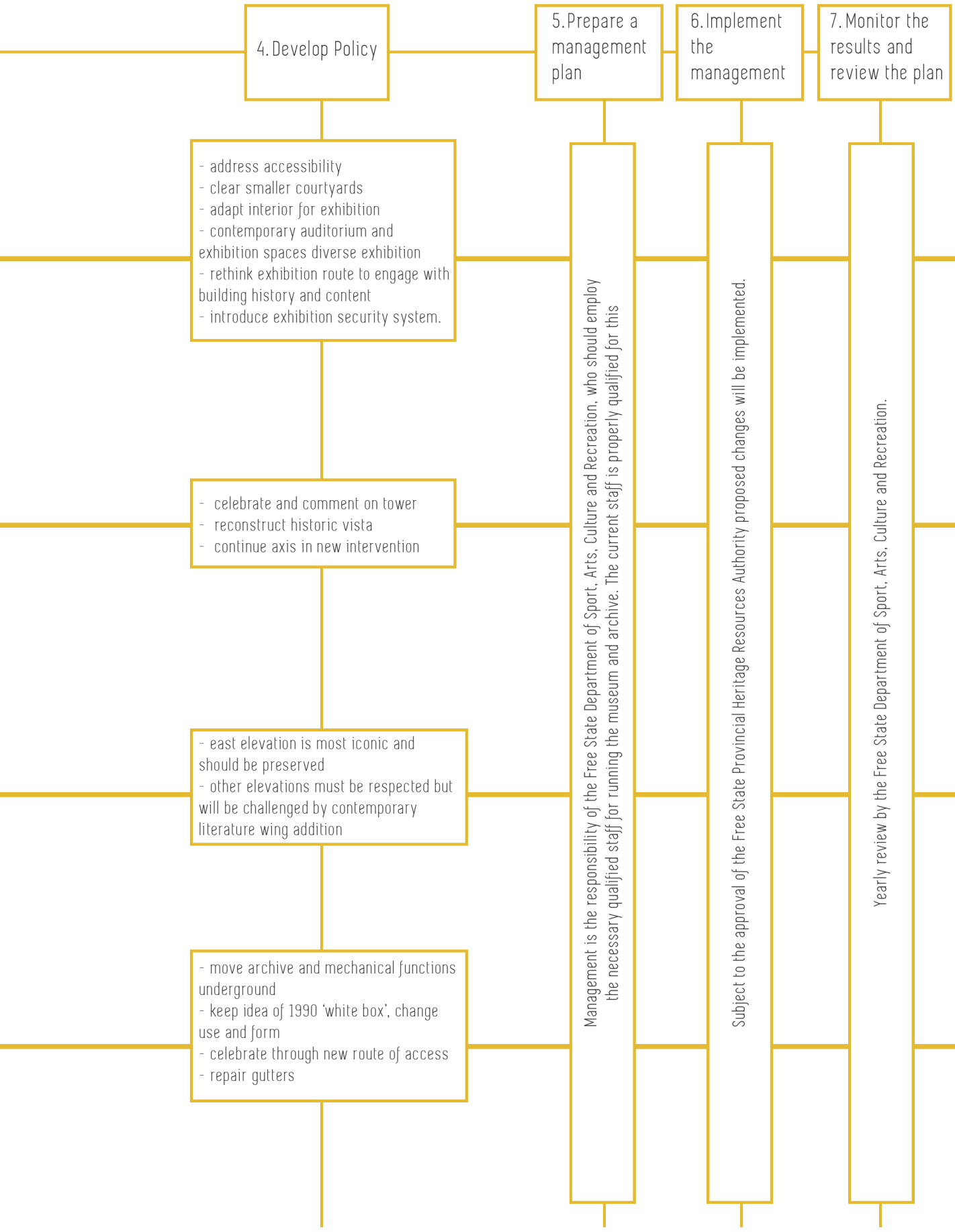
SAHRA's Conservation Principles are a good summary of the Heritage Act's criteria. This requires that any intervention be preceded by an investigation of cultural significance, with documentation and a conservation policy (SAHRA, unknown date: online). The Burra Charter (2013) is used to assess all heritage resources related to this project, resulting in a conservation policy in accordance with the Heritage Act and the SAHRA conservation principles.

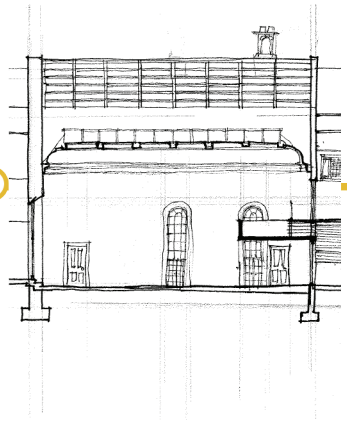
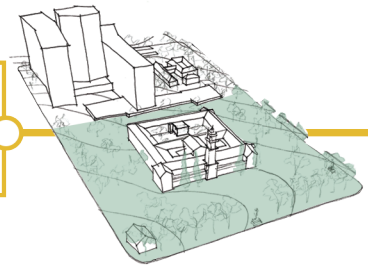
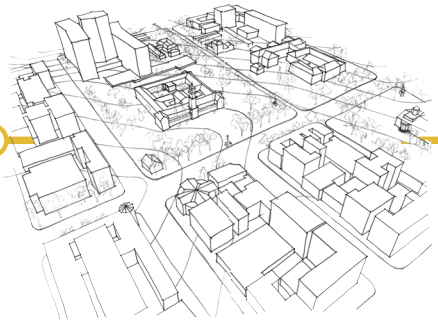
## 2.4.5.2 The Burra Charter

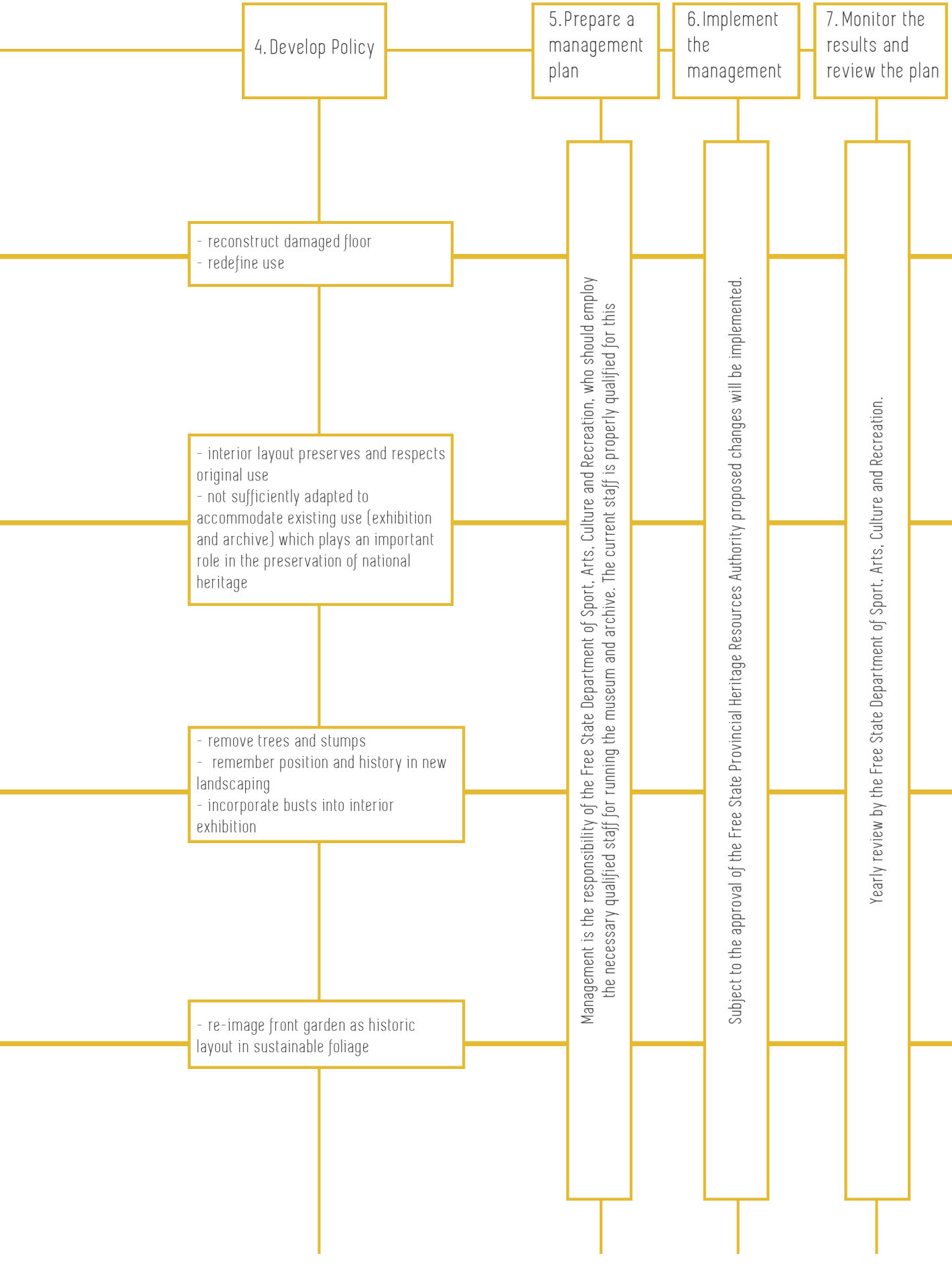
The Burra Charter (the Australian ICOMOS Charter for Places of Cultural Significance) is a document which defines basic principles and procedures for conservation and is a good resource for ensuring that this intervention is in-line with national and international standards.
The Burra Charter favours a cautious approach, centred around the concept of cultural significance (Australia ICOMOS,2013: 1). Cultural significance is defined as "aesthetic, historic, scientific, social or spiritual value for past, present and future generation." (Australia ICOMOS, 2013: 2). This is quite a broad guideline, especially in the South African context where there are so many different cultural groups to be considered. This relies on accurate interpretation, which could be translated into various forms of conservation i.e. maintenance, preservation, restoration, reconstruction and adaptation. Thus, it is important to follow the Burra Charter Process. This allows for an interpretation that considers both the quantitative and qualitative nature of heritage and a variety of conservation methods.

# 2.4.5.3 Conservation policy -
application of the Burra Charter Process

| 1. Understand the place (identifying places and associations) | 2. Assess cultural significance (See 2.4.4 for study of historic significance) | 3. Identify all factors and issues |
|---|---|---|
| Building overall  | - historic value (politically, architecturally, culturally).<br>- important role in preserving cultural heritage through current use. | - overall, well preserved.<br>- in-accessible (vertical circulation & exhibition)<br>- toilet additions clutter courtyards<br>- office layout inhibit exhibitions.<br>- no multi-media facilities<br>- no temporary exhibition spaces<br>- no contemporary literature exhibition<br>- low exhibition security |
| Tower  | - significant axis: connect tower and building to street and historic urban development | - O.R. Tambo (H.F. Verwoerd) Building overshadows tower (historic vista needs to be reconstructed because this was a part of the initial design and identity of the building) |
| Elevations  | - historic value (architecturally) see building history | - preserve character of historic period<br>- also adapt to new context and function (remain relevant functionally and aesthetically) |
| Main courtyard  | - significant part of building layout<br>- contains historic orange trees<br>- current important gathering space for cultural/ literary events | - unique atmosphere of quiet, protected openness<br>- the 1990 addition provided necessary function (archive storage, toilets, mechanical pump, circulation) but encroach upon the courtyard space.<br>- section of gutter needs to be repaired |


4. Develop Policy
5. Prepare a management plan
6. Implement the management
7. Monitor the results and review the plan
- address accessibility
- clear smaller courtyards
- adapt interior for exhibition
- contemporary auditorium and exhibition spaces diverse exhibition
- rethink exhibition route to engage with building history and content
- introduce exhibition security system.
- celebrate and comment on tower
- reconstruct historic vista
- continue axis in new intervention
- east elevation is most iconic and should be preserved
- other elevations must be respected but will be challenged by contemporary literature wing addition
- move archive and mechanical functions underground
- keep idea of 1990 'white box', change use and form
- celebrate through new route of access
- repair gutters
Management is the responsibility of the Free State Department of Sport, Arts, Culture and Recreation, who should employ the necessary qualified staff for running the museum and archive. The current staff is properly qualified for this
Subject to the approval of the Free State Provincial Heritage Resources Authority proposed changes will be implemented.
Yearly review by the Free State Department of Sport, Arts, Culture and Recreation.

| 1. Understand the place (identifying places and associations) | 2. Assess cultural significance (See 2.4.4 for study of historic significance) | 3. Identify all factors and issues |
|---|---|---|
| Third Raadsaal  | - historic seat of political power of the Orange Free State | - wonderfully preserved<br>- functions well as an inside gathering space.<br>-damage to the wood floors, risk to the public safety. |
| Use: Past and present | - significant axis: connect tower and building to street and historic urban development | Past: Governmental offices<br><br>Present: Large collection of Afrikaans Literature (manuscripts, books and other publications, music, records, videos, furniture, objects, costumes, clipping-collection) |
| Tree garden  | - historic trees planted historic dignitaries<br>- Used to contain bust-statues of important Afrikaans literature figures<br>events | - most trees are felled, rest are infested (high risk for archive)<br>- no indication of who the dignitaries were that planted trees. |
| President Brand Conservation Area  | - significant contribution to character of area (stately sandstone, red brick and clay tile roof, 'pavilion' within a 'park', Large trees along boundary) | - 1990 restoration contributed much to overall preservation of area's character.<br>- neglected garden detracts from area aesthetic |


4. Develop Policy
5. Prepare a management plan
6. Implement the management
7. Monitor the results and review the plan
- reconstruct damaged floor
- redefine use
- interior layout preserves and respects original use
- not sufficiently adapted to accommodate existing use (exhibition and archive) which plays an important role in the preservation of national heritage
- remove trees and stumps
- remember position and history in new landscaping
- incorporate busts into interior exhibition
- re-image front garden as historic layout in sustainable foliage
Management is the responsibility of the Free State Department of Sport, Arts, Culture and Recreation, who should employ the necessary qualified staff for running the museum and archive. The current staff is properly qualified for this
Subject to the approval of the Free State Provincial Heritage Resources Authority proposed changes will be implemented.
Yearly review by the Free State Department of Sport, Arts, Culture and Recreation.

# 2.5 Typology

## 2.5.1 Investigating the client and users:

As mentioned previously, the client for this proposal is the Free State Department of Sport, Arts, Culture and Recreation (FSSACR), which runs NALN. Part of the FSSACR's mission statement is to "accelerate the transformation of the country's heritage landscape," (FSPG, 2018: online). Expanding the capacity of NALN will advance its role as a place of heritage preservation and development and so achieve the transformation desire by the FSSACR.

NALN serves as a centre for the preservation of all material and information related to the history and development of Afrikaans literature, music and performance. It is a national resource both as an educational exhibition and research centre. As a public institution, it offers a wide range of public services. The collection is vast and growing (FSSACR, 2017: 3).

NALN also promotes the development and appreciation of Afrikaans in contemporary South Africa, by regularly hosting a variety of events, such as launching new books, author discussions, etc. NALN is therefore an institution that is intentional about remaining relevant to a contemporary audience and promotes appreciation of the diverse history of Afrikaans.

The proposed expansion of the museum and research centre supports this role. Advanced archive facilities will allow for future expansion. Expanding the exhibition spaces increases NALN's public engagement on a larger scale and to a larger audience. Adaption of the Old Government Building ensures the longevity of this heritage building. Buildings that are used daily and where users take ownership, survive whereas heritage buildings with no functional use deteriorate. This achieves the FSSACR's desired transformation of an important part of South Africa's heritage landscape.

### Current NALN services:

Reading and discussion groups
Guided tours
Children's activities - treasure hunt, riddles, ghost tours
Outreach programs
Comprehensive research service
Event hosting - book releases, literature festivals, Free State Arts Festival Literature Festival, etc.

# Intended Users:



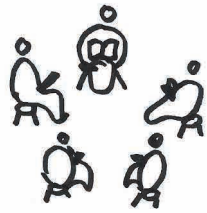
## Museum visitor

[1-200]
Interested in seeing the exhibition.



## Event goer

[50-200]
Attending an event hosted by NALN.



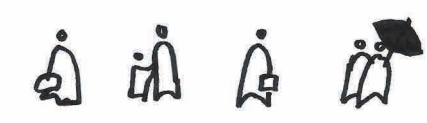
## Reading circles

[5-10]
Meeting in the facilities at NALN.



## Researcher

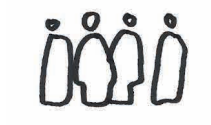
[1-3]
Interested in researching and engaging with the primary sources in the collection.



## General public

Dwelling in the city, moving past and/or through the historic gardens and who might wish to interact with the public institution and take part in the dialogue.

## Expanded Staff



1 - curator
1 - museum tour guide
3 - archivist and two assistants
1 - Main receptionist
1 - Press clippings archivist
4 - research personnel
1 - outreach co-ordinator
1 - librarian
1 - discussion group co-ordinator
1 - graphic designer
4 - administrative team
1 - bookkeeper
1 - gardener
5 - kitchen staff
1 - permanent cleaning staff, supported by regular external cleaning service
1 - security guard

Proposed expanded team of staff members, employed by the institution for collecting, processing and storing the Afrikaans literature collection and to operate the museum.

# 2.5.2 Investigating Similar Functional Typologies

Investigating the built examples of museum and archive functional typologies serves as background for setting-out an accommodation list and understanding the typical ways of organizing these functions. It also establishes the technical requirements to be investigated in the technical report.

First, NALN's own implementation of the functional typologies is investigated to evaluate the current situation and to identify the needs that can be looked for in the other precedent studies. Next, Renzo Piano's expansion and renovation of the Morgan Library in New York is investigated as well as the National English Literature Museum in Grahamstown, RSA. Both serve as good architectural examples of how the functional typologies can be implemented in the new design proposal.

## National Afrikaans Literature Museum and Research Centre (NALN)

- renovation and additions

Location: Bloemfontein, South Africa
Architects: Roodt Architects

Completion 2010

The current application of the functional typologies in the Old Government Building is investigated first before looking at other precedents. This will identify what needs to be altered and what to look at in the other precedents.

The 2010 Roodt intervention focuses on restoring the heritage building. It also introduces a new archive tower with more toilet facilities. A large part of the existing is repurposed for archival space, but these are not in controlled climates such as in the purpose-built archives that Roodt built in the main courtyard.

From this analysis the following aspects are identified, which should be addressed in the new design proposal: The museum exhibition is exceptionally small, despite being the part which ought to engage with the largest amount of people. As a public institution, this function is very important for public engagement, thus the museum exhibition should be expanded. There are also no audio-visual facilities that support contemporary presentation techniques, which are important to engage with the contemporary museum visitor.

Currently, the archive facilities are in the rest of the Old Government Building. This is good in that it gives new purpose to the structure, but it does make it difficult to maintain optimal archive storage conditions. Moving the archive to new purpose-built facilities should therefore be considered.

The courtyards have also become crowded with new toilet and water pump additions, taking away valuable pause-spaces for visitors and staff members. Making better use of these spaces as part of the museum could be explored.

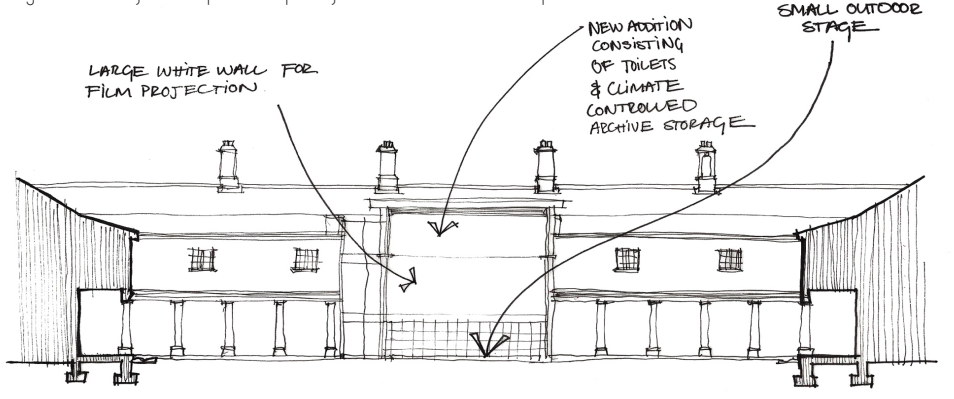



Fig. 2.5.2.1
*Section through the courtyard.* Sketch.



Fig. 2.5.2.2
*Ground Floor Plan analysis.* Sketch.



Fig. 2.5.2.3
*First Floor Plan analysis.* Sketch.

# Accomodation:

## Museum:

- museum shop (2.5 m²)
- exhibition space (481 m²)
- multi-functional space (107 m²)
- performance space (542.5 m²)

## Research centre:

- reading room (38.5 m²)

## Staff:

- offices (510 m²)
- storage (1276.5 m²)

## General:

- reception (23 m²)
- toilets (132 m²)
- kitchenette (42 m²)

# Morgan Library Renovation and Expansion

Location: New York, U.S.A

Architects: Renzo Piano Building Workshop

Completion date: 2006

This project was an existing literature museum and archive in a heritage building that required new facilities. The aim was to increase storage and exhibition capacity and to make the heritage building more accessible as a public resource. The site layout differs from NALN's, but still demonstrates a balance between a quiet, respectful response and a new, contemporary public institution.

Piano introduced three 'pavilions' under a glazed canopy in-between the three heritage buildings, making a soft connection where visitors can dwell (see fig. 2.5.2.5). The main pavilion is open on ground level, drawing visitors in from the street, through to the large new 'plaza' at the centre (see ig. 2.5.2.8. and 2.5.2.9).

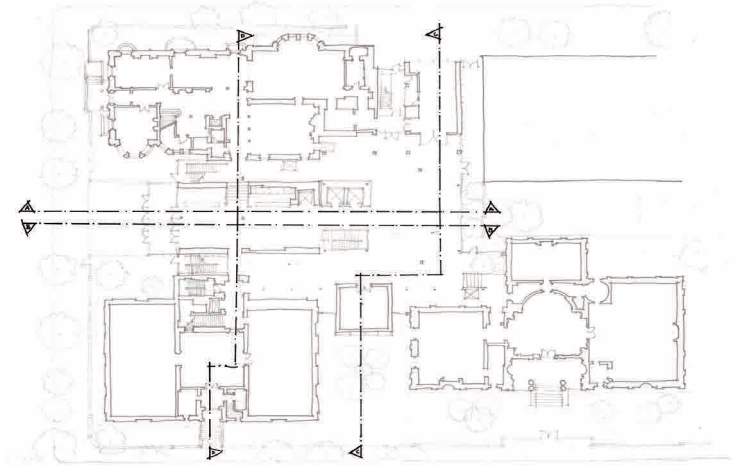


Fig. 2.5.2.4
*Ground Floor Plan.* Sketch.

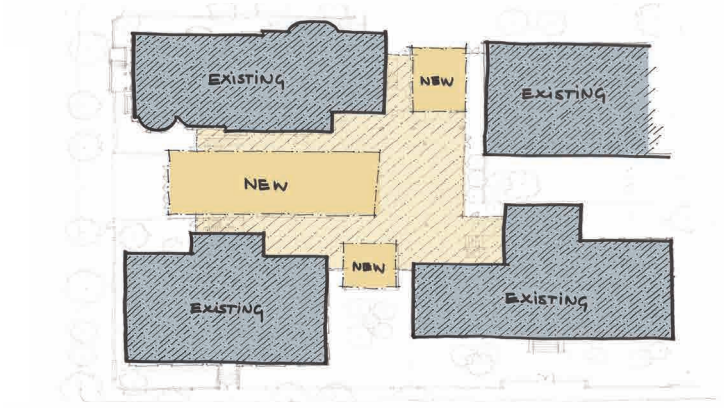



Fig. 2.5.2.5
*Ground Floor Plan analysis - existing vs new.* Sketch.

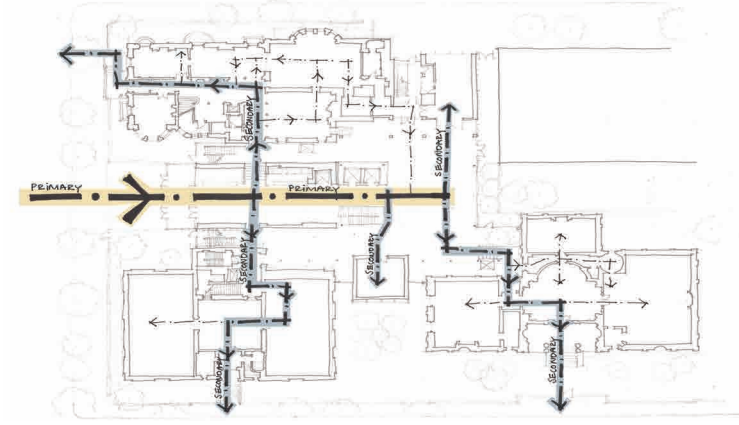



Fig. 2.5.2.6
*Circulation on plan.* Sketch.

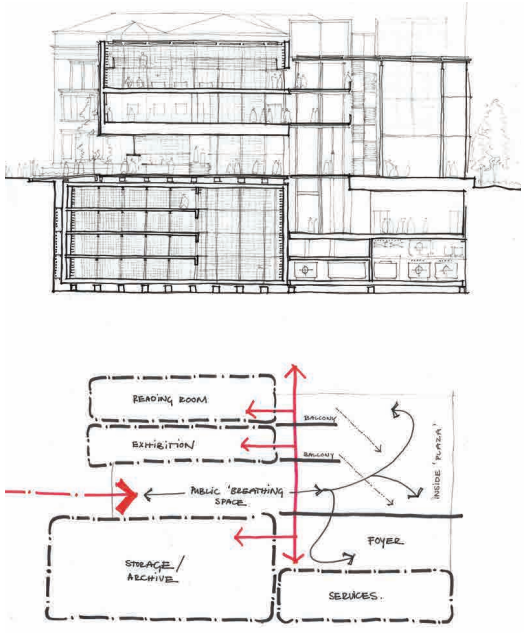



Fig. 2.5.2.8
*Section AA.* Sketch.

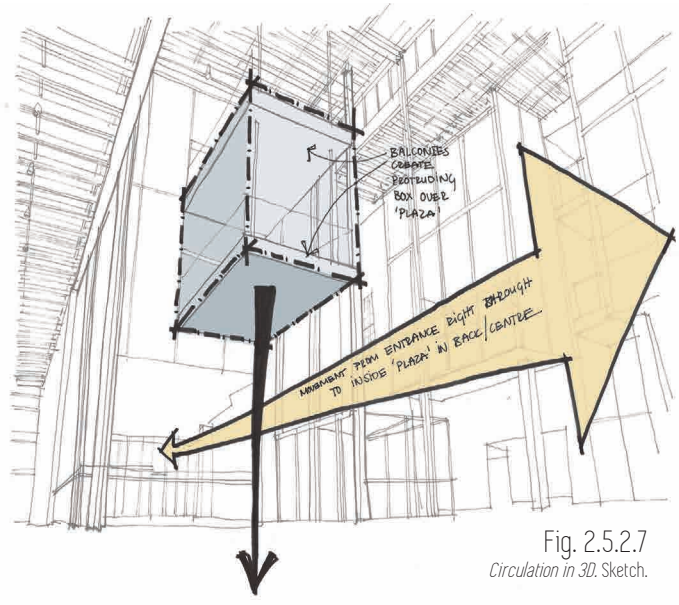



Fig. 2.5.2.7
*Circulation in 3D.* Sketch.

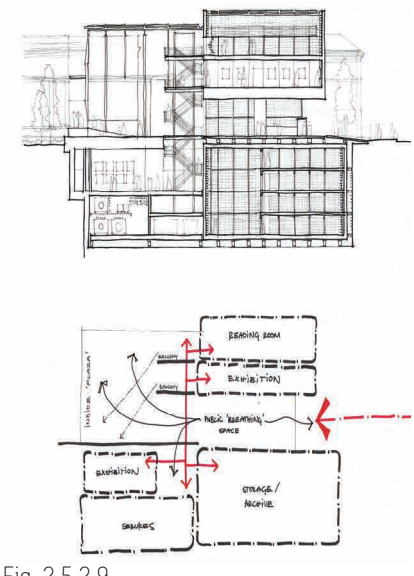



Fig. 2.5.2.9
*Section BB.* Sketch.

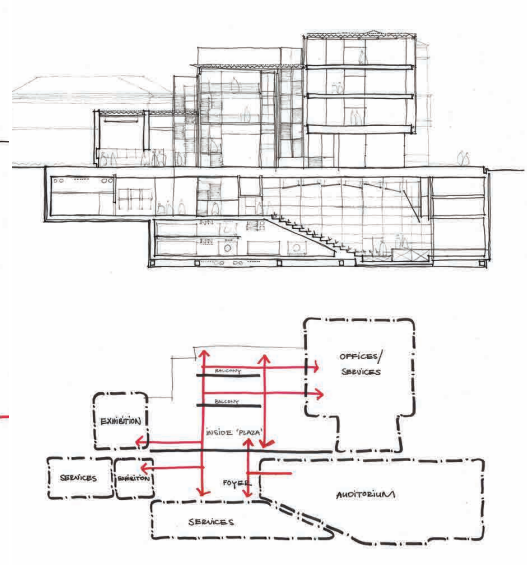



Fig. 2.5.2.10
*Section CC.* Sketch.

A primary circulation route forms an axis between the street, main entrance and this 'plaza'. From this, visitors circulate vertically and horizontally (see fig. 2.5.2.6). There is a continuous communication between different levels, especially around the 'plaza' (see fig. 2.5.2.10).

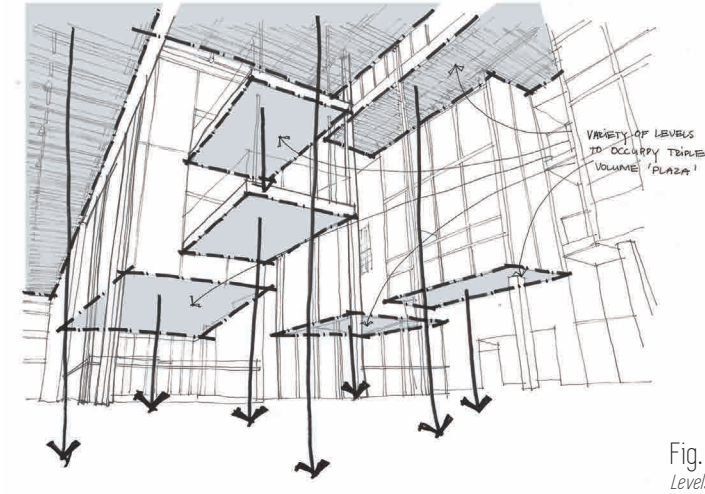



Fig. 2.5.2.11
*Levels.* Sketch.

This space demonstrates the unique atmosphere of a triple volume space within a public building (see fig. 2.5.2.12). In this space, the new also celebrates the old, where the new structure creates a frame around the outside wall and entrance of one of the heritage buildings (see fig.2.5.2.13).

The new addition respects the existing on elevation by being set back from the street. It also recognizes the importance of proportions by creating a strict rhythm that is constant, but not overpowering. This strict rhythm is also not a direct copy, thus avoiding a tautological response.

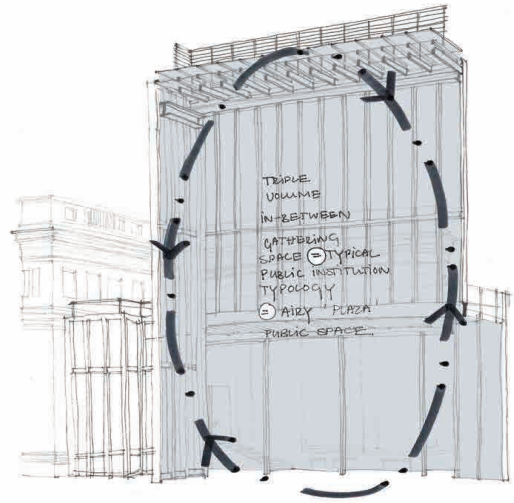



Fig. 2.5.2.12
*Triple volume spatial quality.* Sketch.

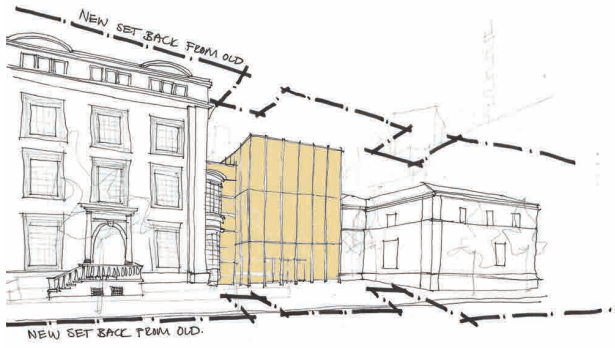



Fig. 2.5.2.14
*Street elevation set back.* Sketch.

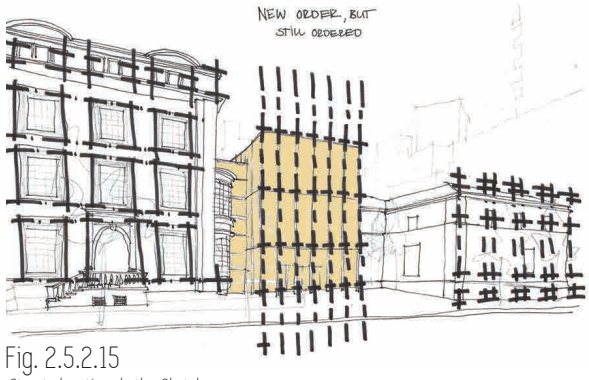



Fig. 2.5.2.15
*Street elevation rhythm* Sketch.

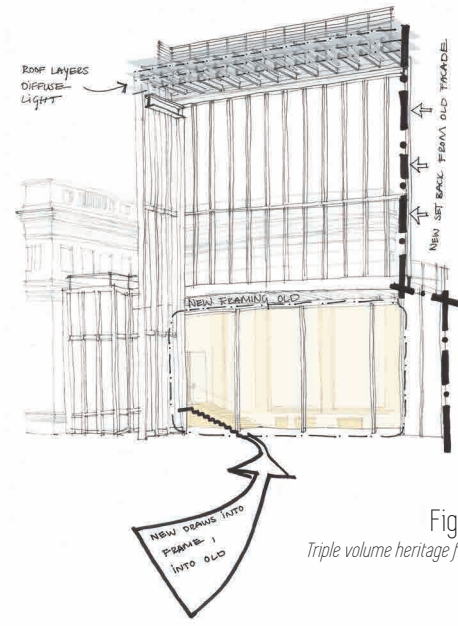



Fig. 2.5.2.13
*Triple volume heritage frame.* Sketch.

Functionally, Piano buried a new archive 'vault' and a new auditorium, allowing the ground floor level to flow out of the street level. It is transformed into public space in-between the exhibitions in the historic buildings and the new pavilions. This is resourceful as both functions need artificial lighting and ventilation in any case and the lack of natural light is therefore not a problem.

## Lessons learnt:

- Balance between new voice and listening to existing
- Existing elevation rhythm does not have to be copied, but these references are helpful
- Contrast between lower entrance space and triple volume interior gathering space
- New, purpose-built archive allowed more exhibition in existing
- Archive and auditorium placed underground is resourceful, allowing for more exhibition space in the existing building
- The new addition frames the heritage buildings

# National English Literature Museum (NELM)

Location: Grahamstown, South Africa
Architects: Intsika Architects
Completion date: 2016

NELM is now housed in a new, purpose-built facility. Its primary function is similar to NALN but focused on South African English literature. The parallels between these two museums are that both must publicise and popularise the works in their collection, allowing access to all members of the public (Department of Arts and Culture, s.d.: online).

NELM moved from a smaller historic building into the new state-of-the-art facility in 2016. The new building was necessary because of the expanding collection. The lack of connection to a heritage site, however does not make this project an appropriate example of the typology applied to a historic building. Rather, it serves as an example of a purpose-built literature museum's functionally planning and provides an extensive accommodation list that can be compared to the functions of NALN very closely.

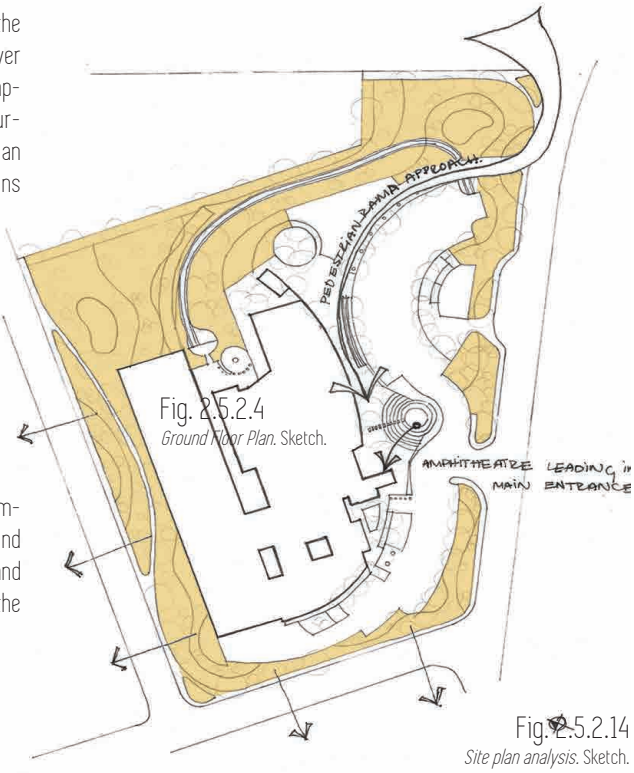



Fig. 2.5.2.4
*Ground Floor Plan.* Sketch.

The importance of outside public space is addressed through the amphitheatre and landscaping around the building. The landscaping and exterior design guides the visitors towards the building entrance and provides valuable outdoor space for the local community, including the public that do not necessarily enter the museum.

Fig. 2.5.2.14
*Site plan analysis.* Sketch.

The program is divided into three units: museum, archive and offices. These function individually, but also link through the main entrance from where visitors are directed to the appropriate unit.

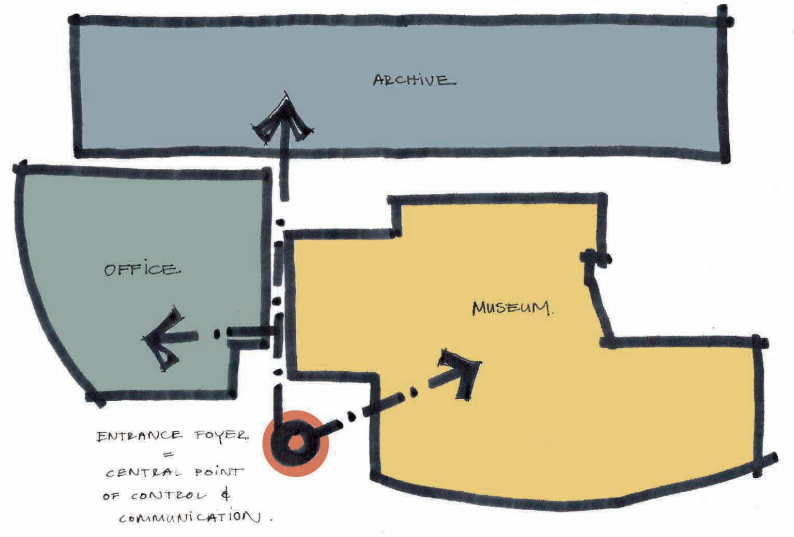



Fig. 2.5.2.15
*Layout Diagram.* Sketch.

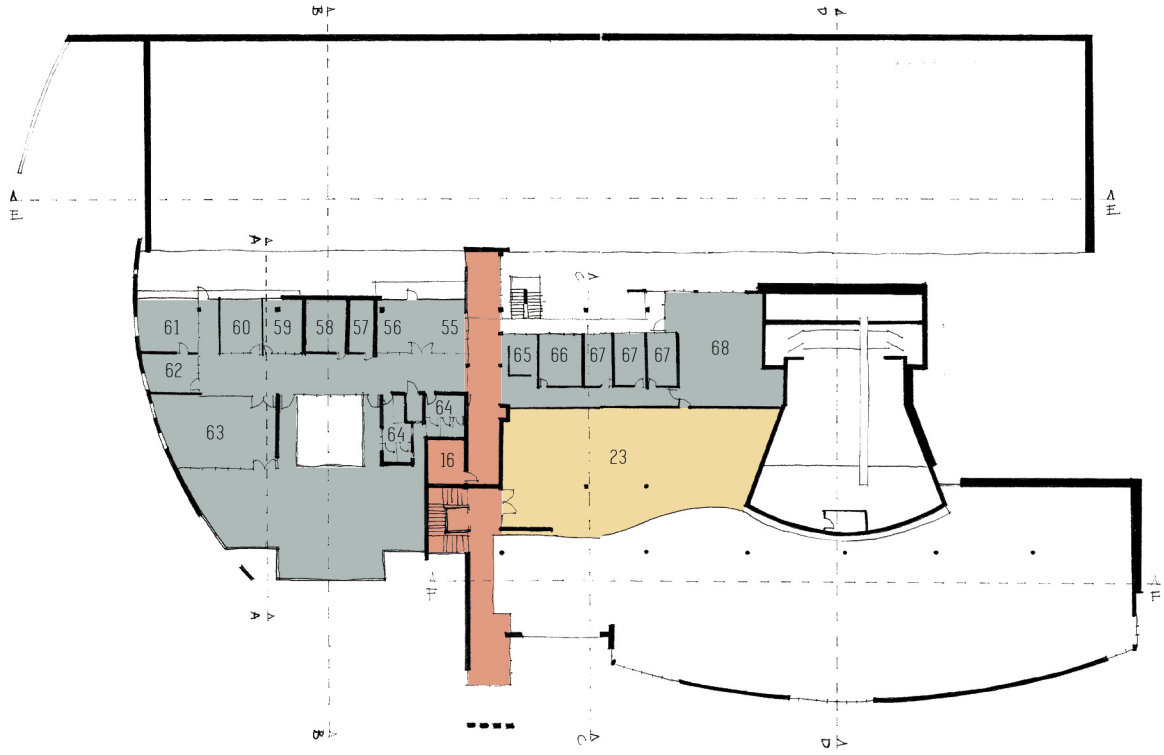



Fig. 2.5.2.16
*First floor plan.* Sketch.

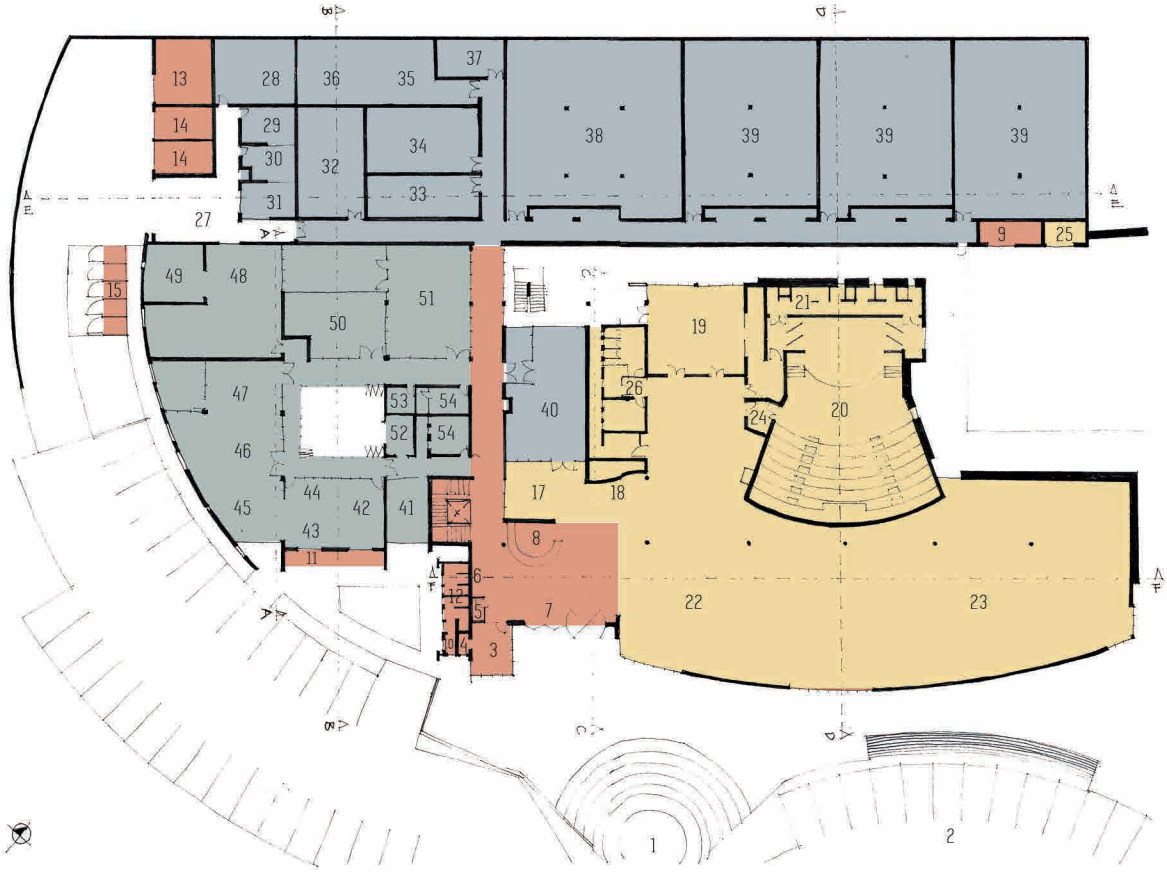



Fig. 2.5.2.17
*Ground floor plan.* Sketch.

| | | | |
|---|---|---|---|
| General: | 1 | Amphitheatre | 900 m² |
| | 2 | On-site parking | 46 bays |
| | 3 | Guard room | 8 m² |
| | 4 | Guard toilet | 1 m² |
| | 5 | Security search room | 2.5 m² |
| | 6 | Lock up facility (24 lockers) | 12.4 m² |
| | 7 | Entrance foyer | 62.6 m² |
| | 8 | Reception | 20 m² |
| | 9 | Garden store | 6.6 m² |
| | 10 | Gardener toilet | 1 m² |
| | 11 | Bicycle store | 16.4 m² |
| | 12 | Shower facilities (male, female) | 21.8 m² |
| | 13 | Generator room | 31.9 m² |
| | 14 | Officials parking | 2 bays |
| | 15 | Waste management | 10 m² |
| | 16 | Server room | 10.3 m² |
| | | | |
| Museum: | 17 | Bookshop | 25 m² |
| | 18 | Food servery | 5.6 m² |
| | 19 | Lecture room | 80 m² |
| | 20 | Auditorium (144 seats, control) | 240 m² |
| | 21 | Backstage area (male and female ablution, make-up, changing cubicle) | 36.2 m² |
| | 22 | Multifunctional space | 174.7 m² |
| | 23 | Exhibition space | 1084 m² |
| | 24 | Storage tables/chairs | 5 m² |
| | 25 | Storage props | 14.4 m² |
| | 26 | Toilets (male, female, disabled, mother's room/ first aid room) | 73.5 m² |
| | | | |
| Archive: | 27 | Loading bay | 32 m² |
| | 28 | Temporary store | 46 m² |
| | 29 | Fumigation room | 15 m² |
| | 30 | Ventilation room | 15 m² |
| | 31 | Conservation workshop | 15 m² |
| | 32 | Storage three-dimensional | 60 m² |
| | 33 | Storage journals | 60 m² |
| | 34 | Storage press clippings | 60 m² |
| | 35 | Storage theatre manuscripts | 50 m² |
| | 36 | Storage other | 20 m² |
| | 37 | Storage special store | 20 m² |
| | 38 | Storage library/ book collection | 270 m² |
| | 39 | Storage all language manuscripts | 3 x 200 m² |
| | 40 | Reading room (1 assistant cubicle + 8 reading desks) | 80 m² |

| | | | |
|---|---|---|---|
| Offices: | | | |
| Curatorial section: | 41 | Training room (6 desks) | 13 m² |
| | 42 | Section head office | 15 m² |
| | 43 | Oral literature office | 7.5 m² |
| | 44 | Outreach co-ordinator office | 7.5 m² |
| | 45 | Educational personnel office (2 desks) | 15 m² |
| | 46 | Press clippings office | 15 m² |
| | 47 | Librarians (4 desks) | 30 m² |
| | 48 | Graphic design office (2 desks) | 90 m² |
| | 49 | Graphic design store | 30 m² |
| | 50 | Research personnel (4 desks) | 34 m² |
| | 51 | Archivists (4 desks) | 30 m² |
| | 52 | Kitchenette | 10 m² |
| | 53 | Cleaner store | 5 m² |
| | 54 | Toilets (male, female) | 16 m² |
| Administration section: | 55 | Administration team office (4 desks) | 16 m² |
| | 56 | Bookkeeper's office | 12 m² |
| | 57 | Strong room | 10 m² |
| | 58 | Stationery room | 17 m² |
| | 59 | Deputy Director office | 16.6 m² |
| | 60 | Senior CFO office | 16.6 m² |
| | 61 | Director office | 20 m² |
| | 62 | Accountant's office | 15 m² |
| | 63 | Boardroom | 60 m² |
| | 64 | Toilets (male, female) | 70 m² |
| Tenant section: | 65 | Reception | 18 m² |
| | 66 | Kitchenette/staff room | 24 m² |
| | 67 | Office cubicle (1 desk) | 3 x 12.6 m² |
| | 68 | Open plan office (7 desks) | 54 m² |

# The museum:

The museum is the most accessible of the three units. From the reception visitors can move to the bookshop, food servery, lecture rooms, auditorium and multi-function/exhibition space. The auditorium and lecture rooms allow NELM to host a larger variety of events, which they were unable to do in the past. The exhibition spaces demonstrate how large, adaptable spaces allows for a greater variety of exhibitions.

Literature museum exhibitions contain light sensitive material. Therefore, the design must carefully consider how light enters the building. As natural light can damage the fragile paper, NELM has a dark interior finish and minimal glazing, using artificial lighting in the exhibition space. Together with the irregularity of the display cases, this creates an intimacy between the visitor and display.

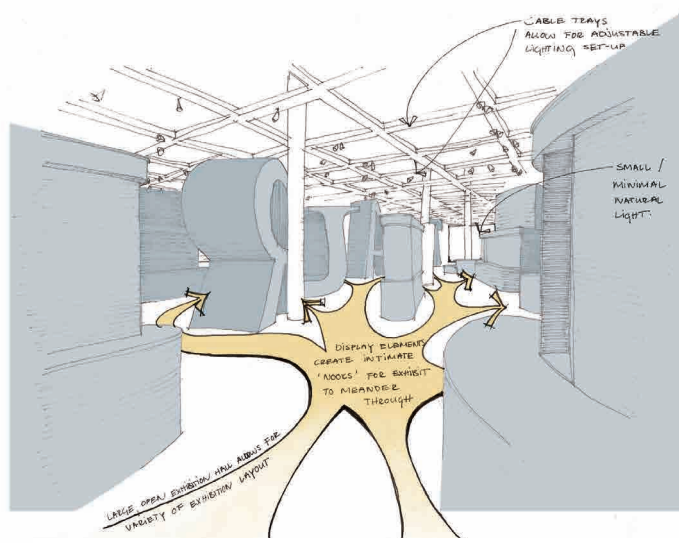



Fig. 2.5.2.18
*Exhibition layout 1.* Sketch.

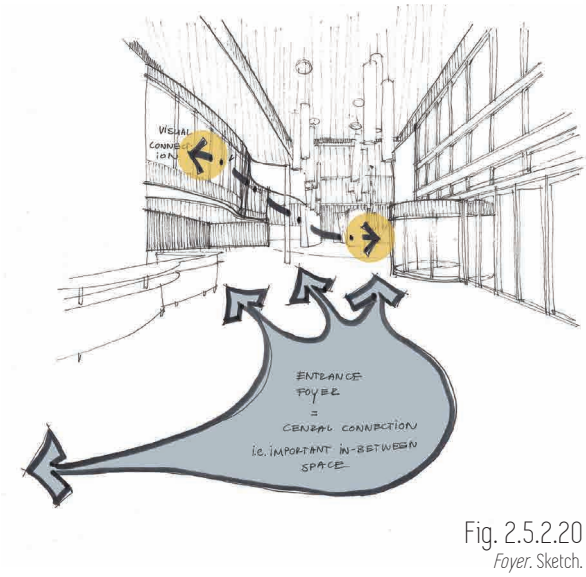



Fig. 2.5.2.20
*Foyer.* Sketch.

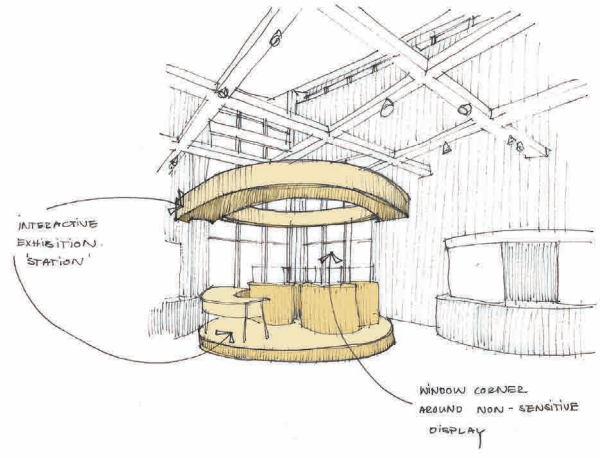



Fig. 2.5.2.19
*Exhibition layout 2.* Sketch.

# The archive:

The archives are tucked away at the back of the building, sunken and hidden under a green roof. The reading room, however, is connected to the bookshop and accessible to the public.  All the archive functions, especially the storage spaces, is kept in the same general space. This is better practice than spreading it across the building, as with NALN, because keeping it separate from the public is a good security measure.

The layout was done according to the archival process, starting with the delivery bay at the back. Next is the temporary store, fumigation and ventilation rooms and conservation workshops, followed by the storage facility. These were divided according to content and have specific requirements, which will be investigated in the technical report .

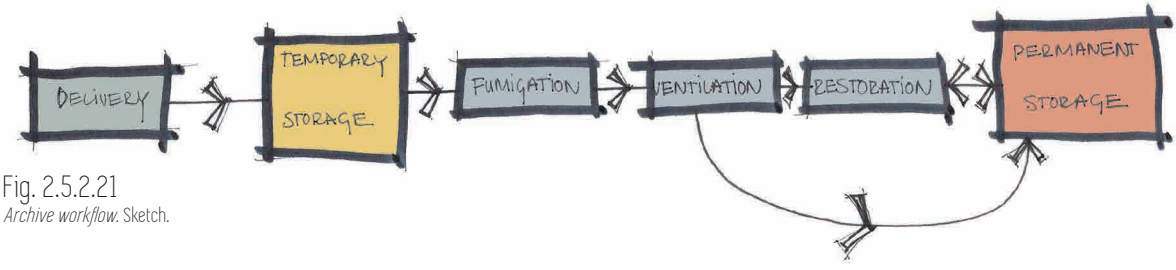



Fig. 2.5.2.21
*Archive workflow.* Sketch.

## The offices:

The office space accommodates the permanent archive and museum staff. A rentable office space is included to provide additional income for the institution. The offices use the same main entrance, but a second door in the hallway provides controlled access to permanent staff-only areas.

The museum and archive offices were organized around a courtyard, providing for natural light to enter through the glazing. These offices are divided with curatorial staff on ground floor and administrative staff on first floor. The tenant office spaces can function independently on the first floor, with its own reception and staff room.

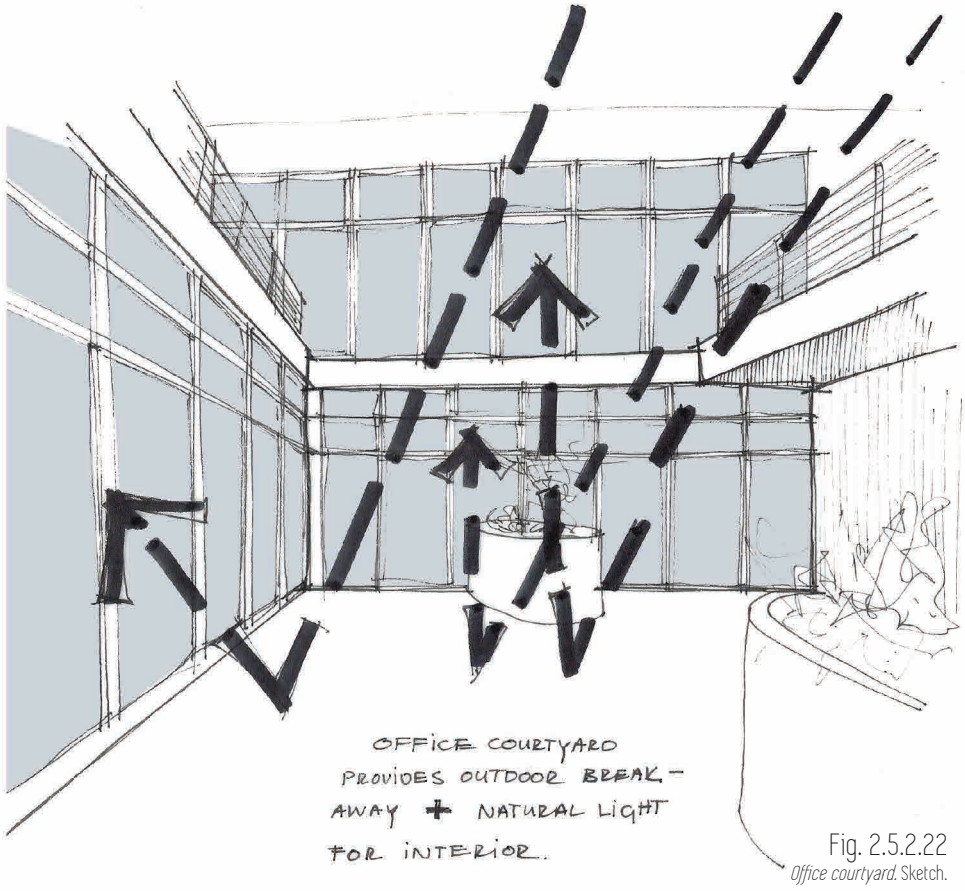



Fig. 2.5.2.22
*Office courtyard.* Sketch.

## Lessons learnt:

- Organize functions into three units: museum, archive, offices. These share some general functions but should function individually.
- Value of auditorium and lecture room as public functions within a public institution.
- Versatile multi-functional space and larger temporary exhibition spaces.
- Archive functions grouped together and separated from public.
- Archive organized according to archival process and workflow.
- Office spaces have private courtyard, kitchen and toilet facilities.

# 2.5.3 Accommodation list

## Basement

Main foyer
Main reception
Toilet facilities

Archive reception
Archival staff office
Press clippings office
Research personnel (4 desks)
Reading room
Temporary storage
Fumigation room
Ventilation room
Conservation workshop
Storage
- furniture
- three-dimensional objects
- journals
- press clippings
- theatre manuscripts
- artwork
- audio-visual artefacts
- posters and programs
- sheet music and music manuscripts
- book manuscripts
- book collection

Exhibition 1 - History of Afrikaans
Exhibition 2 - temporary/ multi-functional space
'Die Kelder' - second-hand bookshop/reading room
Librarian (1 desks)
New tower

Auditorium - 200 seats
Backstage -
Storage - props
Storage - tables/chairs

## Ground floor

Public Plaza
Main entrance

Staff entrance
Guard room
Locker room
Training room
Outreach co-ordinator office
Educational personnel office (2 desks)
Graphic design office (2 desks)
Graphic design store
Administration team office (4 desks)
Bookkeeper office
Strong room
Stationery room
Boardroom
Staff room
Cleaner store
Staff toilets
Gardener room

Small courtyards - outside seating
Snack bar counter
Snack bar kitchen

3rd Raadsaal
Exhibition 3 - temporary
Exhibition 4 - temporary
Exhibition 5 - temporary
Exhibition 6 - temporary
New tower
Main courtyard

## First Floor

New Tower
Exhibition 7 - 'Eerste Taalbeweging' (First Language Movement)
Exhibition 8 - 'Tweede Taalbeweging' (Second language Movement)
Exhibition 9 - 1920's
Exhibition 10 - 1930's
Exhibition 11 - Corner office
Exhibition 12 - 1960's
Exhibition 13 - 1970's
Exhibition 14 - Corner office
Exhibition 15 - 1980's
Exhibition 16 - 1990's

Toilet facilities

## Second Floor:

New Tower
Exhibition 17 - temporary: contemporary literature
Exhibition 18 - temporary: contemporary literature
Exhibition 19 - contemplation space

Look-out point

# 2.6 Morphology

## 2.6.1 Theoretical Discourse Introduction

The following theoretical discourse aims to provide a theoretical foundation for the further exploration of what the new design proposal might be. Starting with the dialogue between the old and new, the concept of language is explored. A phenomenological approach to language will be established followed by in in-depth discussion of Heidegger's (1951) understanding of language. It will be done using poetry and architecture to explore the nature of language. This will lead to a better understanding of how man can respond using the language of architecture. Norberg-Schulz's (1985) understanding of the language of architecture demonstrates what this language consists of. Ultimately this should help uncover how the new design proposal can respond appropriately to the heritage building.

## A heritage dialogue

In the preamble of this document, the dialogue that exists between the old and the new was briefly introduced (see fig. 2.6.1.1). This idea becomes the starting point for the theoretical discourse. Any new proposal that includes a heritage building, encounters the tension that exists between contemporary innovation and historic preservation. Ultimately, when the design for the expansion of NALN is proposed, there will be a dialogue between the new additions and the existing heritage building. The new design proposal will be seen as a comment on the heritage building. Exploring what this comment could be, is guided by the following question:

What should this new design proposal say about heritage?

Through the touchstone and other research, it is clear that there are many theoretical concepts that could be investigated, but the most fundamental concept in this design exploration is language. Language as a concept is relevant, firstly, because this dissertation deals with the Afrikaans language and, secondly, because a dialogue as a discussion requires language. This is already contained within the stated question:

What does this new design proposal *say* about heritage?

This implies that architecture speaks using a language unique to the built environment. This language will be evident in both the heritage building and the new expansion. The new expansion is understood as something that speaks because there is an existing voice of the place that already speaks. An understanding of language that recognizes this voice leads to an understanding of how the new voice could respond appropriately to the existing voice. The next step is to investigate language.

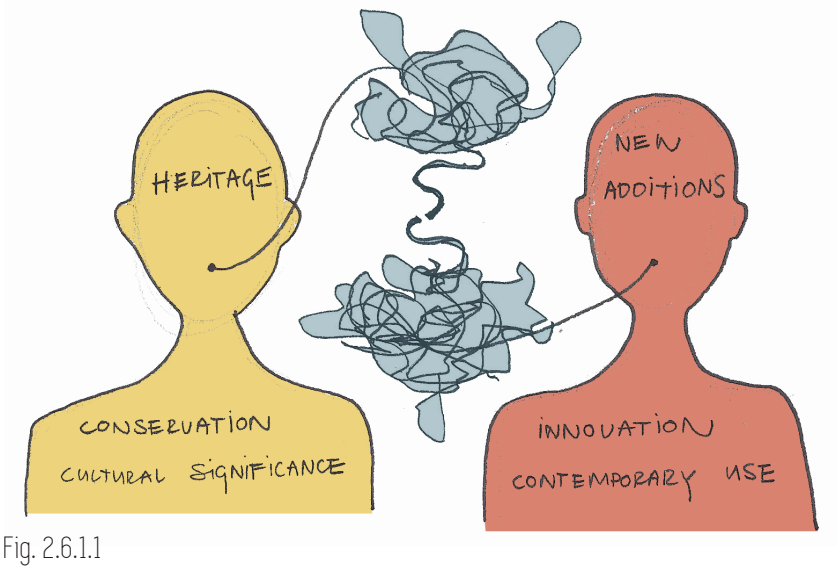



Fig. 2.6.1.1
The dialogue of the dissertation. Sketch.

# Language - a phenomenological approach:

The concept of language could be approached from many angles. It is a vast field to address in terms of architecture, so in the scope of this dissertation, a phenomenological approach to language is used. This approach is the most appropriate because the initial objective was to inspire an appreciation of the heritage buildings and literature collection through an expansion which reveals anew to the visitors the value of these phenomena. Phenomenology in the field of architecture can be described as "the work of laying-open and letting be seen, which involves the dismantling of concealment" (Healy, O'Byrne, 2008: 5). Phenomenology, as an approach, is about revealing different phenomena for what they are, so that they can be understood. This is precisely what the proposed design hopes to achieve: for the phenomena that is NALN and the Old Government building to be unconcealed and revealed to a contemporary public, so that this public can engage with, understand and appreciate it.

The phenomenological approach states that language "plays a part in the fundamental revelation of the world" (Polt, 199: 176). This means language is interlinked with the revealing of our being as 'someone' and awareness of things and world. Heidegger's definition of language states that "Language is the house of Being." (Heidegger, 1946: 217). Through this statement, Heidegger demonstrates how closely related language is to the way in which we understand phenomena. It is so close, in fact, that language is the metaphorical container within which our existence, our being, is understood (see fig. 2.6.1.2).

What does this mean for the new design proposal? It means that both an understanding of what the heritage building says and what the new expansion and addition will say, is contained within language. Language is the way in which each is experienced and expressed and so a clearer understanding of language itself opens a route for exploring what the dialogue between the new and old might be.

Heidegger's writing on language is a rich phenomenologically orientated source for investigating. His writing demonstrates an understanding of the close relationship between language and unconcealing the being of phenomena. For this reason, it is Heidegger work, titled Language (1951), which will be used as the primary source for revealing the being of language.



Fig. 2.6.1.2
Rumsey P. 1999. *Library head.* Charcoal artwork (Paul Rumsey online archive - http://cpm.paulrumsey.co.uk/displayimage.php?album=6&pid=54#top_display_media)

Fig. 2.6.1.3
Trukington, T. 2016. The exterior of the Constitutional Court of South Africa. Photograph (Constitution Hill website - https://www.constitutionhill.org.za/blog/discovering-constitution-hill)




## Heidegger and language:

Heidegger's investigation into the being of language starts by recognizing the ever-present connection between language and our existence. This is because "as soon as man looks thoughtfully about himself, he quickly hits upon language too," (Heidegger, 1951: 187). Language is how we process the world. It is an integral part of our understanding of being on the earth, under the sky, within the world. We cannot describe our being without language, we cannot even think without encountering language. In the South African context, for example, language has become a very important part of self-identification.

Following the 1994 democratic election, there was a shift toward recognizing and celebrating the vast cultural diversity in our nation. A part of this process was recognizing the different languages spoken and now there are 11 official languages. This indicates just how important language is to mortals as they orientate themselves within the new social and political landscape of South Africa. This signifies how instrumental language is to identity.

Recognizing the importance of language in the process of unconcealing phenomena is very important. Applying this to the current design proposal, it leads to the recognition that both language itself and the language of architecture will play an important role in the process of unconcealing NALN and the Old Government Building. The process of understanding this starts with an understanding of language itself.

## Language is language:

The connection between language and our being is so strong that it has shaped our definition of language. According to Heidegger, language is usually incorrectly defined as a tool for expressing our own being (Heidegger, 1951: 190). It could be said that this is a superficial definition of language because it considers language from a biased, human perspective. This is understandable, since language is so integral to our understanding of our own being, but it falls short in uncovering the being of language itself. It has been established that we cannot express our own being without language, but this does not necessarily mean that it is not possible to express the being of language without confusing it with our own being.

Heidegger addresses this by stating that "language is language" and this understanding of language as language is the only way to free the definition from preconceptions (Heidegger, 1951: 188). This statement can seem confusing. Looking beyond the tautological nature of this statement, Heidegger is simply saying that a new perspective for looking at language is necessary.

Fortunately, Heidegger elaborates on this statement by connecting language as language, to language as speaking. "Language speaks" and defining the nature of speaking will reveal the nature of language (Heidegger, 1951: 188). Understanding speaking is the next step in understanding language itself.

## Understanding speaking - misconceptions:

Before defining speaking, Heidegger identifies the following misconceptions concerning speech. It is worth mentioning these for the sake of clarity before this discourse continues, ensuring that the reader is aware of Heidegger's specific perspective. These misconceptions are as follows:

a. "Speaking is an expression" (Heidegger, 1951: 190). It externalizes the internal.

b. Speech is "an activity of man" (Heidegger, 1951: 190). It is an action unique to humans, meaning language (and everything else, including architecture) cannot speak.

c. Language, as human expression, is a "presentation and representation of the real and the unreal" (Heidegger, 1951: 190). Thus, speech is a human symbol.

## Understanding speaking - the purely spoken, the poem:

Heidegger uses the poem, which he considers to be the "purely spoken", to demonstrate this new viewpoint, specifically Georg Trakl's A Winter Evening (1951: 192-208). Through analysis of the poem, Heidegger uncovers five aspects of speaking. These five aspects will now be discussed in detail. For each aspect, Heidegger's identification of the aspect in A Winter Evening is discussed. To analysis this further, the aspects will also be looked at through the Afrikaans poem, *Dennebosse*. Finally, each aspect will be investigated in terms of architectural examples.

# A Winter Evening

Window with falling snow is arrayed.
Long tolls the vesper bell,
The house is provided well,
The table is for many laid.

Wandering ones, more than a few,
Come to the door on darksome courses.
Golden blooms the tree of graces
Drawing up the earth's cool dew.

Wandering quietly steps within;
Pain has turned the threshold to stone.
There lie, in limpid brightness shown,

Upon the table bread and wine.

Georg Trakl (Heidegger, 2001: 207-208).

# Dennebosse

Blou see van denne teen die hang -
tot, op die blanke horison
die verste toppe yl word in
opaal van hoë lug en son.

'n Blou nabye heiligheid
wat tussen see en hemel staan,
waaroor die groot, mistieke dans

van vreemde stille wolke gaan.

N.P. van Wyk Louw (1932-1934: 3)

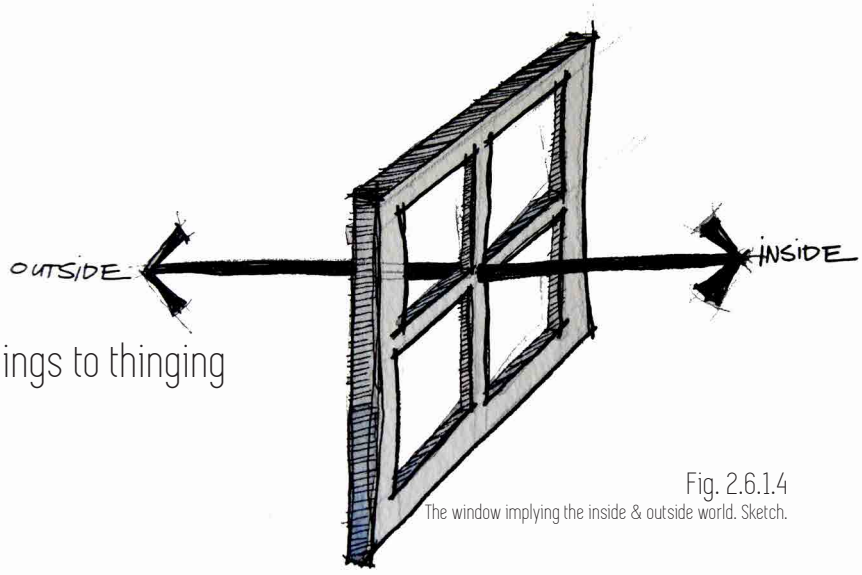



Fig. 2.6.1.4
The window implying the inside & outside world. Sketch.

## Aspect 1 - Speaking bids things to thinging and so bear the world

*A Winter Evening* exploration:

The first stanza of *A Winter Evening* demonstrates speaking as a naming, which is a calling and as such it is a speaking that gathers "the presence of what was previously uncalled into a nearness." (Heidegger, 1951: 196). Through this gathering, the things gather to themselves "sky and earth, mortals and divinities," i.e. the world-fourfold (Heidegger, 1951: 197). The poem is a naming that gathers the things, and through their being bear the world.

Take, for example, the first line of the stanza. The window is a thing that is named. The poem describes the window and it comes to being in the mind of the reader (see fig. 2.6.1.4). In the mind's eye the window's being is revealed as an opening between the inside and outside. Within this understanding of the window's being there is also a gathering of the world. The naming of the window speaks not only of the window itself, but also of the inside world and the outside world that sits between.

Furthermore, the more in-depth the description or naming of the window, the more of the window's being is understood and a greater part of the world is revealed. It is not just any window, but a window framing falling snow. The phenomenon of the window is more clearly revealed and so is the phenomena of the outside world, where it is snowing, and the inside world, where the reader might imagine it is warm and protected from the outside weather (see fig. 2.6.1.5).

The same kind of exploration can be conducted with the other lines in the stanza, where the bell, the house and the table are also things that are named and bear an aspect of the world in the poem. Looking for this naming in an Afrikaans poem, however, may prove an even more enriching source for this discourse.

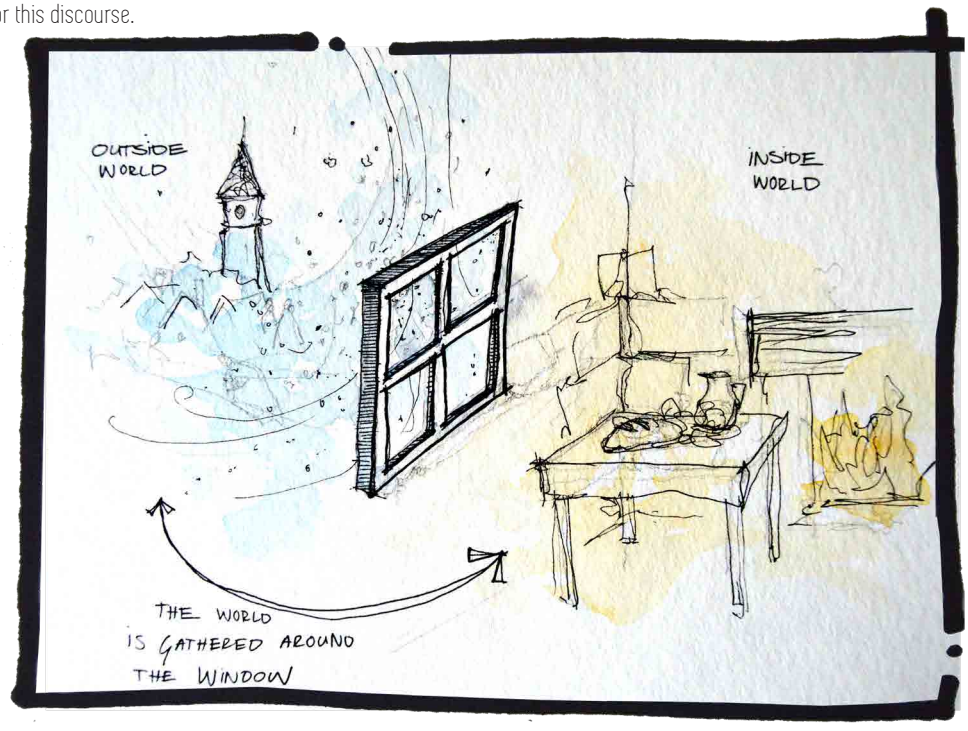



Fig. 2.6.1.5
The window revealing the inside & outside world in-depth. Sketch.

*Dennebosse* exploration:

In the first line of *Dennebosse*, this same naming occurs. The poet describes the blue sea of pine trees on the cliff and so brings into being not only the trees and the cliff, but the entire landscape that are made up by these things. Again, a more descriptive naming of the thing also means that there is more about the world that is revealed. There is a sea of trees, so the vastness of the world around the trees is revealed (see fig. 2.6.1.6). This see is also blue, not green as one might expect. This conveys something unique about the tone of the landscape, a mysterious, calm depth that is not stated outright, but contained within the naming of the pine trees. In this, the speaking of language brought about the being of the forest, the thing, which in turn reveals to the readers something about the nature of the world around the forest.

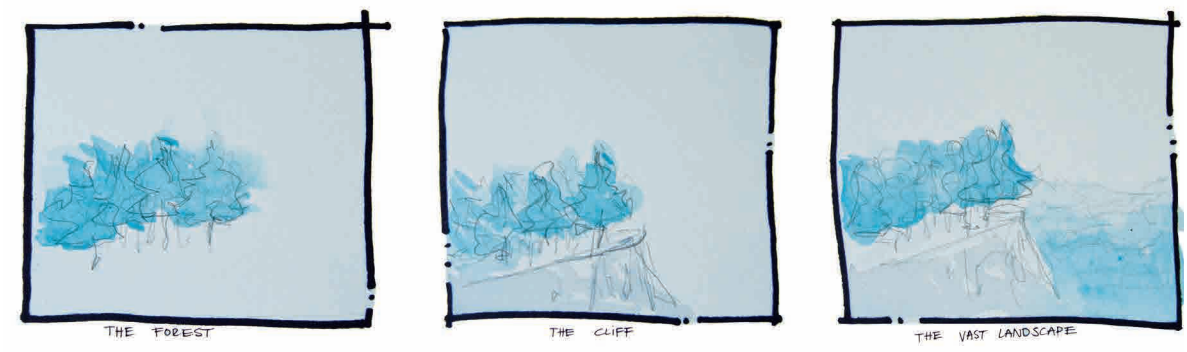



Fig. 2.6.1.6
Gathering of the trees to bear the landscape. Sketch.

Architecture exploration:

The naming of things commonly occur in works of literature, where putting a name on paper brings about the thing's existence in the mind. Through this continuous naming, the writer brings about entire worlds that exist around these things. The range of what these things can be is vast. This includes trees, like in *Dennebosse*, or household items, such as the table in *A Winter Evening*. It can be an architectural component, such as a window, or even an entire work of architecture. This is how the speaking that names things can occur in architecture.

A work of architecture is a thing and naming it says something about its being and the world where this takes place. The tower as an architype is a thing and its name speaks about its being (see fig. 2.6.1.7). If I say 'tower', a tall vertical axis between the earth and sky, a finger pointing mortals towards the divine, is called to being in the mind. The earth over which it towers and the sky which it touches also comes to the foreground. There are also the mortals that it draws closer and orientates and the divine that it reaches towards. In this way it is not only a tower, but a thing that through its gathering bears the four-fold world where the tower is towering.

The Old Government Building Tower is an example of this. By naming it, a specific tower is called, part of a specific building, bearing a specific world (see fig. 2.6.1.8). The naming brings into being its specific form, with its layers of red brick and sandstone, the four clock faces, the sculptural stone work and the British crown at the top. In this elaborate design, something is said about the world within which it was designed to exist. The current tower was re-designed by F. Taylor after the fire of 1908 and speaks of the context within which this tower existed (Botes, 1991: 149). During this time, Bloemfontein was governed by Britain and this tower speaks of British political power and authority, punctuated at the top with the British crown set in stone. Within this one thing, the entire context of Bloemfontein at that time is revealed.

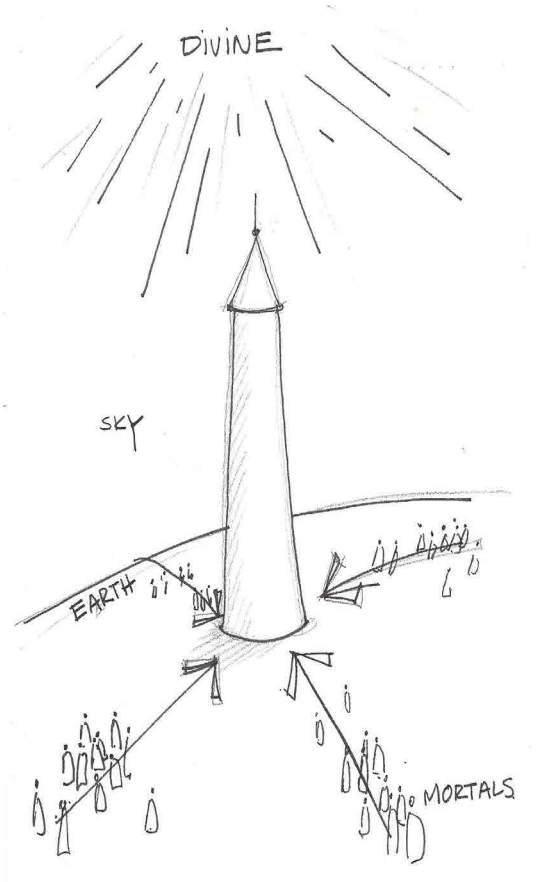



Fig. 2.6.1.7
The archetypal tower. Sketch.

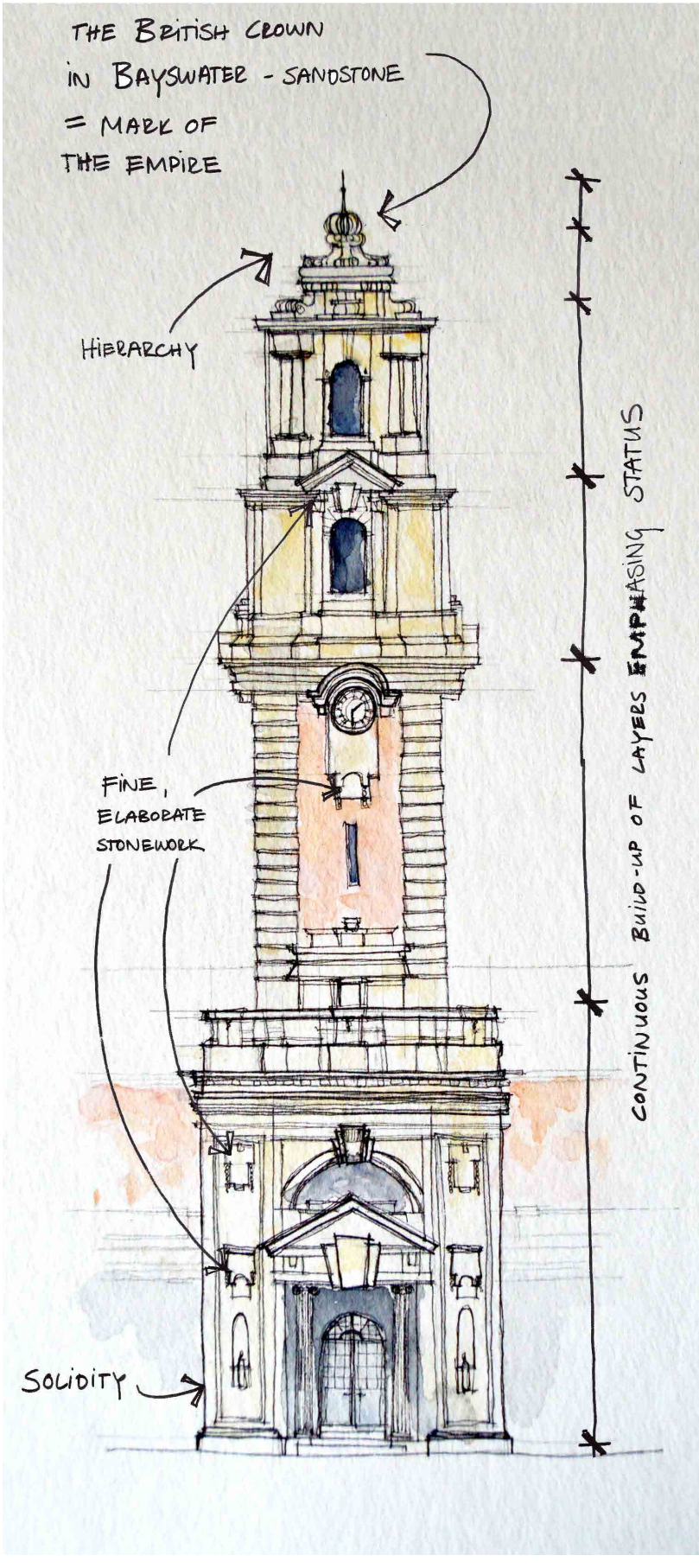



Fig. 2.6.1.8
The Old Government Building bearing the world of British Bloemfontein. Sketch.

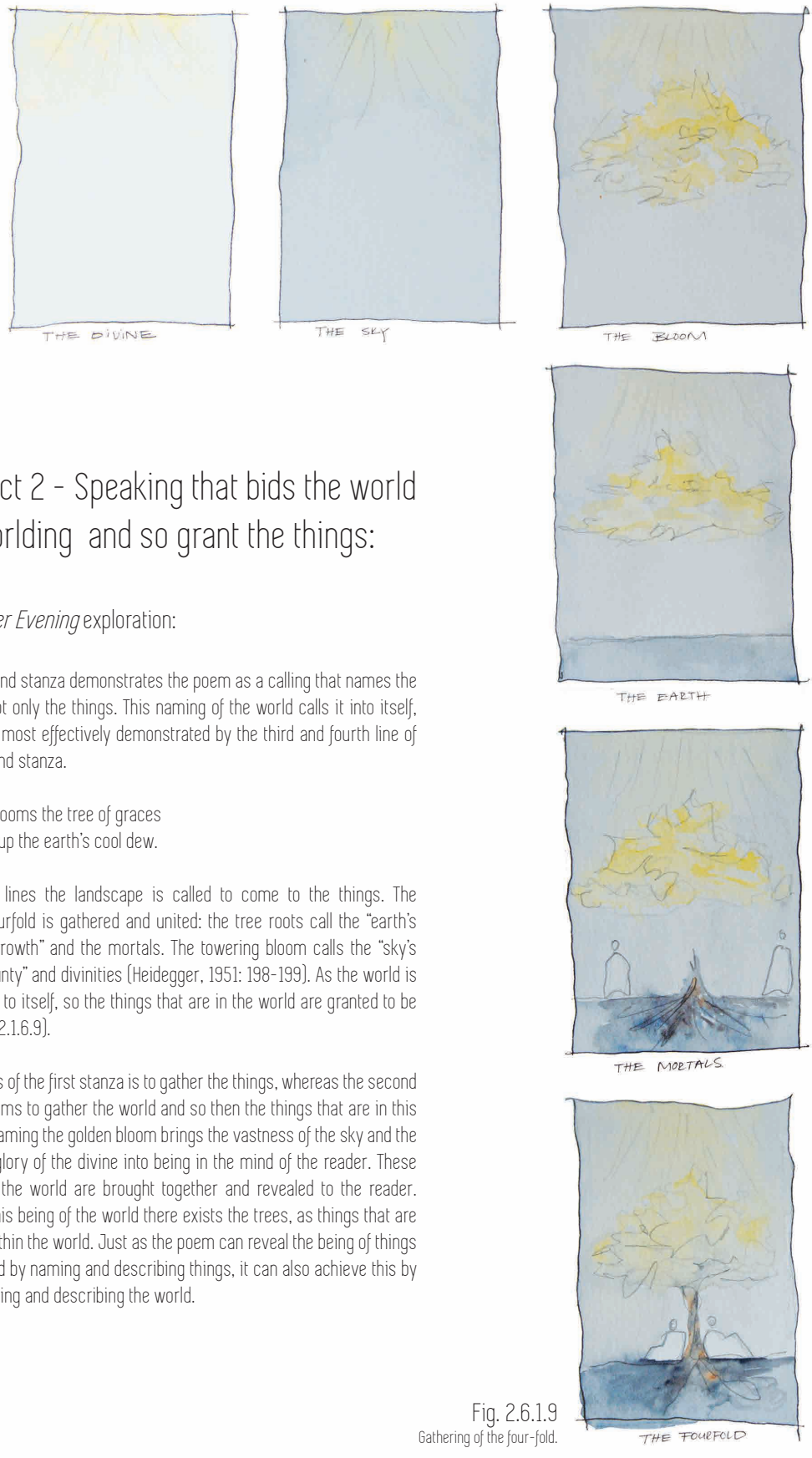



Fig. 2.6.1.9
Gathering of the four-fold.

## Aspect 2 - Speaking that bids the world to worlding and so grant the things:

*A Winter Evening* exploration:

The second stanza demonstrates the poem as a calling that names the world, not only the things. This naming of the world calls it into itself, which is most effectively demonstrated by the third and fourth line of the second stanza.

Golden blooms the tree of graces
Drawing up the earth's cool dew.

In these lines the landscape is called to come to the things. The world-fourfold is gathered and united: the tree roots call the "earth's abated growth" and the mortals. The towering bloom calls the "sky's open bounty" and divinities (Heidegger, 1951: 198-199). As the world is gathered to itself, so the things that are in the world are granted to be (see fig. 2.1.6.9).

The focus of the first stanza is to gather the things, whereas the second stanza aims to gather the world and so then the things that are in this world. Naming the golden bloom brings the vastness of the sky and the shining glory of the divine into being in the mind of the reader. These parts of the world are brought together and revealed to the reader. Within this being of the world there exists the trees, as things that are borne within the world. Just as the poem can reveal the being of things and world by naming and describing things, it can also achieve this by first naming and describing the world.

*Dennebosse* exploration:

This gathering of the world that then bears the things also occurs in the second to fourth line of *Dennebosse*. The poem starts by naming the horizon and describing it as blank. The sky is brought into its being as a sort of canvas onto which then the vastness of the pine forest is revealed (see fig. 2.6.1.10). It is the revealing of the open, emptiness of the sky's being that then bears the being of the thing, the forest, and reveals something of the being of this thing, which is that it starts to fade (*y/ word*) as it continues out into the infinite. This hints at the gathering of the divine, which is done clearly in the fourth line. The divine is gathered in the notion of this infinity which stretches beyond the sight of mortal eyes, into the opal-ness of the beyond and the unreachable height of the sky, bearing another thing, the sun.

By describing aspects of the world or landscape around the pine forest, the poet gathers the world together for the reader. Once this has been done, the things that exist within this world is revealed and so the being of both world and things are unconcealed for the reader.

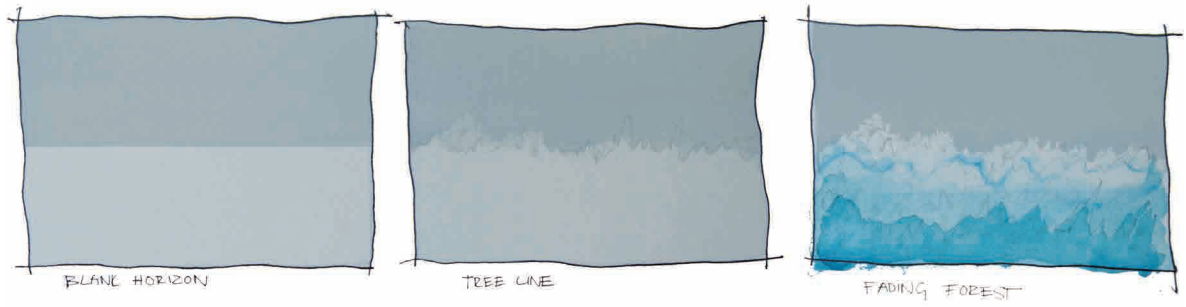



Fig.2.6.1.10
*Gathering of the horizon to reveal the forest.* Sketch.

Architecture exploration:

Architecture also bids the world to worlding through naming again, meaning architecture can also gather the world within which the thing, the work of architecture, can then exist. Calling this place "The City of Bloemfontein" bids it into its being: a small, flat city under the vast Free State sky with a unique history and people and its own past, present and future. This worlding of Bloemfontein then bears within it the countless things which are found here, from buildings to people and among these things is the Old Government Building and NALN.

This can be demonstrated by looking back at the decision to place the Old Government Building at the top of Maitland Street (currently Charlotte Maxeke Street). According to van der Westhuizen, during the time that this building was first built, Bloemfontein was experiencing a second growth boom and creating new public buildings was an opportunity to create public spaces and introduce civility in the untamed African landscape. Thus, it was decided to place the New Government Building (now the Old Government Building) at the top of Maitland Street, already a very important urban axis (Van Der Westhuizen, 2011: 95-96). This was an era of progression and the people developing Bloemfontein wanted to establish prominence. By placing a prominent public building at the top of an important street, the planners were in a manner of speaking, gathering the world of Bloemfontein to this one point, where a new thing, the architecture, can exist (see fig. 2.6.1.11).

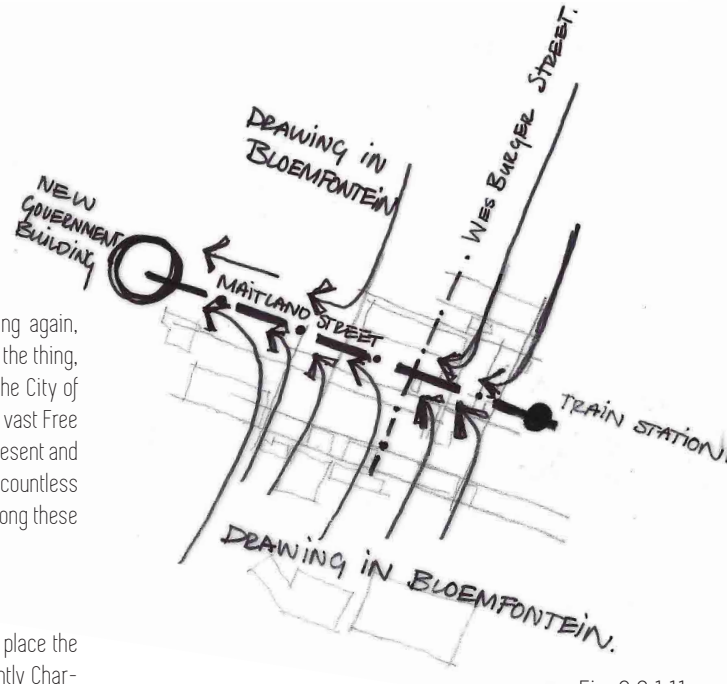



Fig. 2.6.1.11
Bloemfontein being drawn in through Maitland Street to the New Government Building. Sketch.

This gathering of Bloemfontein then shaped the thing or architecture that is revealed at this point. Looking down Maitland street, the buildings are gathering towards the top of the street and form a frame for the thing that is to be borne there (see fig. 2.6.1.12). This thing becomes the tower. This is the culminating point of the gathering of Bloemfontein. It is the point where the horizontal axis, becomes a vertical axis and the people of Bloemfontein (the world) can be gathered to and orientated around this point (see fig. 2.6.1.13).

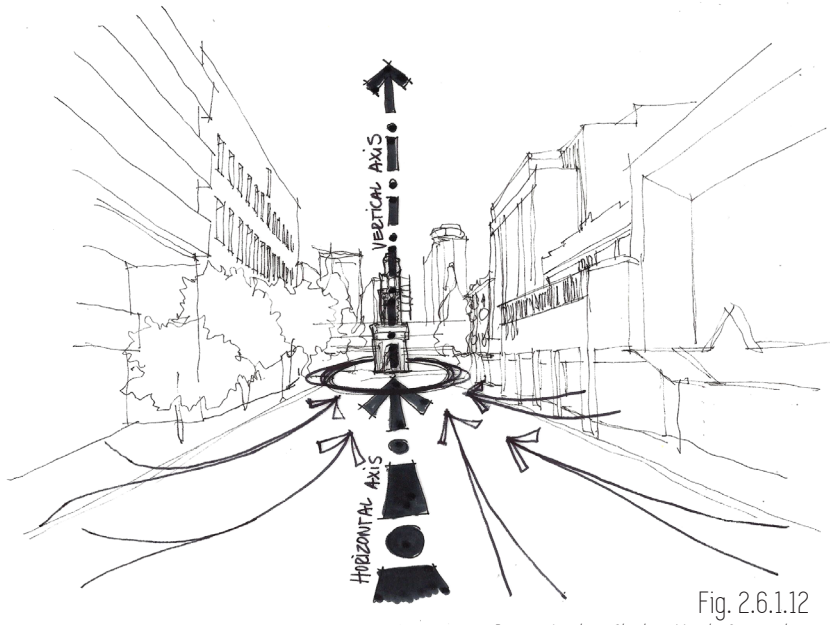



Fig. 2.6.1.12
*Perspective down Charlotte Maxeke Street, where the world is gathered to the tower.* Sketch.

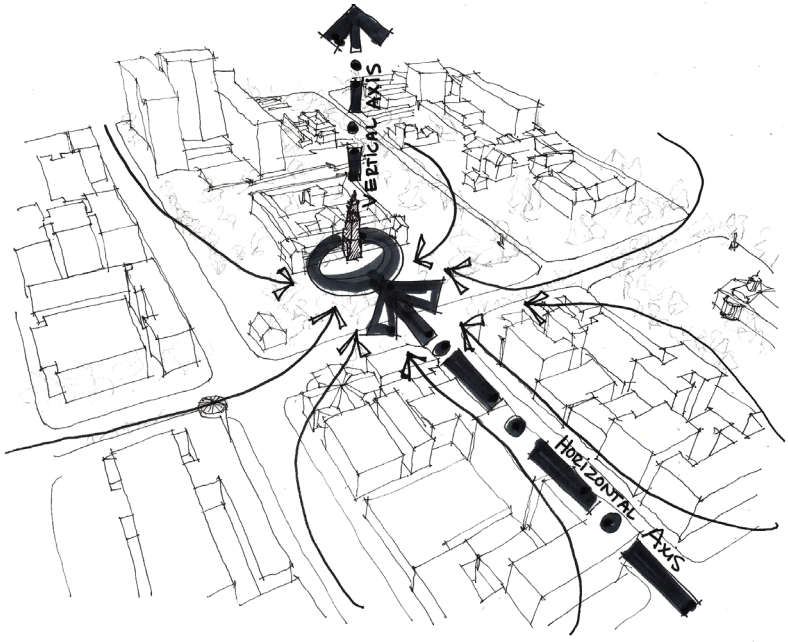



Fig. 2.6.1.13
*The world being gathered to the Old Government Building.* Sketch.

## Aspect 3 - Speaking that bids the middle between the world and thing, the intimacy:

*A Winter Evening* exploration:

The first two stanzas start to demonstrate how the things and the world are unconcealed and their being is revealed to the reader. Once these phenomena have been revealed, a relationship between them also comes into being. This is what Heidegger refers to as the between or intimacy and he uses the third stanza to explain this aspect of speaking.

Wandering quietly steps within;
Pain has turned the threshold to stone.
There lie, in limpid brightness shown,
Upon the table bread and wine.

According to Heidegger, the third aspect of speaking now gathers the things, which has been gathered in the first stanza, and the world, which has also been gathered in the second stanza, together. This gathering of the two modes of bidding calls the intimacy of thing and world to come to the between of the dif-ference (Heidegger, 1951: 203). This dif-ference is the dimension, not necessarily only physical or numerical, that measures the intimacy between world and thing (Heidegger, 1951: 200). The world and thing are gathered closely and even more of their being is unconcealed. The reader can now understand their being in relation to each other.

The 'wandering' or world is drawn into the dwelling and brought to the table or things and it can now be understood that these are related. It could be interpreted that this stanza reveales that the world is wandering because it has not yet come inside to where the things are and the things themselves have been revealed as existing for the purpose of drawing the world closer and to provide comfort and shelter. Thus, the reader is shown another level of understanding of the being of world and things.

It is important to understand, however, that this close relationship between the world and thing does not mean that they have become one. Within the intimacy is a clear separation, not a fusion (Heidegger, 1951: 199). It is precisely this separation, this tension between the different beings that allows for the comparison that will reveal more about the being of each one. Casey describes this intimacy as a "knowing by direct contact, by bodily being there." (Casey, 2008: 4). This explains that the closeness does not have to be a merging, but rather a being present together that leads to a deeper understanding of the other's being. The difference between their being is understood in the dif-ference.

This 'bodily' contact indicates that this dif-ference between world and thing has a physical, spatial nature. It can be described as a threshold. This threshold can be physical and/or mental, described in poetry and literature.

## *Dennebosse* exploration:

An example of mental thresholds, that gathers the things and world to the in-between, can be seen in the first two lines of the second stanza *Dennebosse.*

'n Blou nabye heiligheid
wat tussen see en hemel staan,

The words *nabye* (close) and *tussen* (between) both indicate that the divine has been drawn closer to the forest and is now in-between the sea of trees and the heavens. In this moment of poetic intensity, the 'presence' of both the things (the trees) and the world (the divine and the sky) exists together. They do not become one, and yet together they form a space for what is going to happen in the next two lines (see fig. 2.6.1.14). The gathering of these happens in an in-between, which now becomes a metaphorical space where both can exist and be experienced.

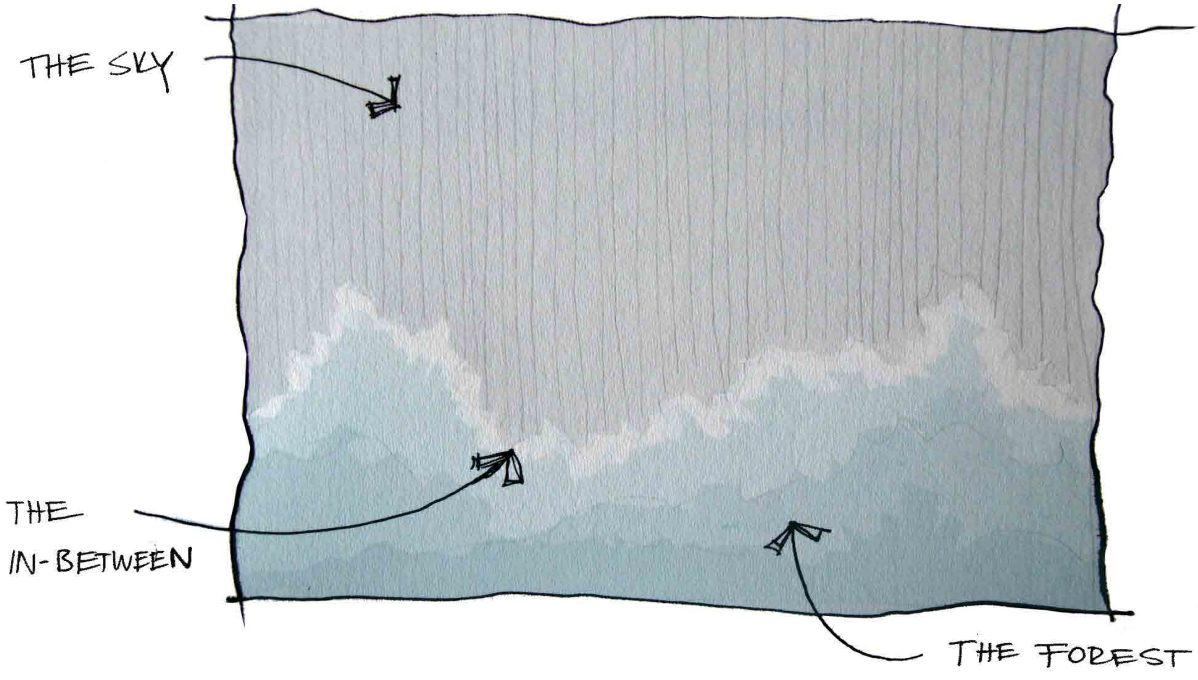



Fig. 2.6.1.14
*The in-between or intimacy between the sky and the forest.* Sketch.

Architecture exploration:

In works of architecture both mental and physical thresholds exist. These can be identified in the Old Government Building and its context. The public gardens surrounding the building could be considered an example of both. As a physical threshold, it is the physical space through which visitors must move to access the building. The current condition of this physical threshold, however, could be criticised for not truly being a place of intimacy (see fig. 2.6.1.15). There is no intimacy where a visitor might measure their own being against that of the thing (Old Government Building) and world (Bloemfontein city dwellers). The threshold does not draw in either the thing or the world and so their dif-ference cannot be measured or revealed. This threshold therefore does not yet speak in the same way that poetry speaks, which is something that should be addressed in the new design proposal.

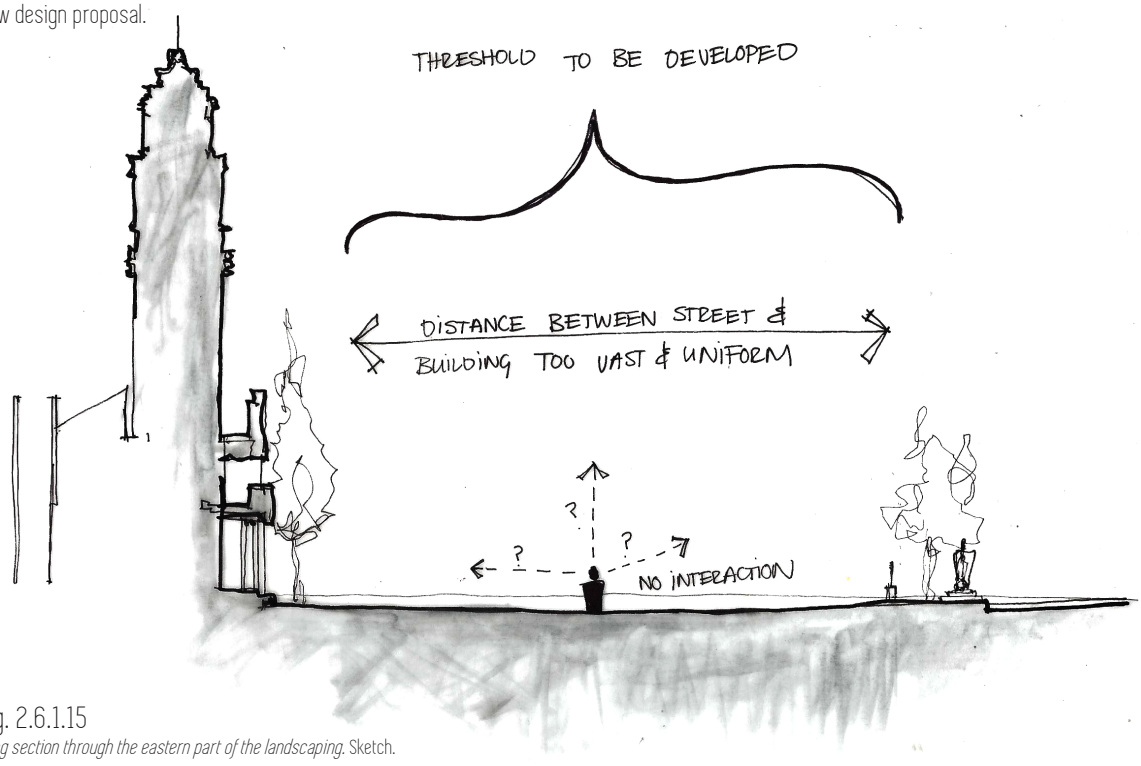



Fig. 2.6.1.15
*Long section through the eastern part of the landscaping.* Sketch.

Looking at this space as a mental thresh-old, might provide some clue as to how this might be achieved. As a mental threshold, this space fails to draw in the world to the thing because it is metaphorically inacces-sible. The public gardens no longer invite the contemporary public to dwell within the space. There is no engagement with the public, so the public does not use the space and so the opportunity to understand the being of the heritage building and the being of the world around it is missed. This is something that can be addressed in the new design proposal.

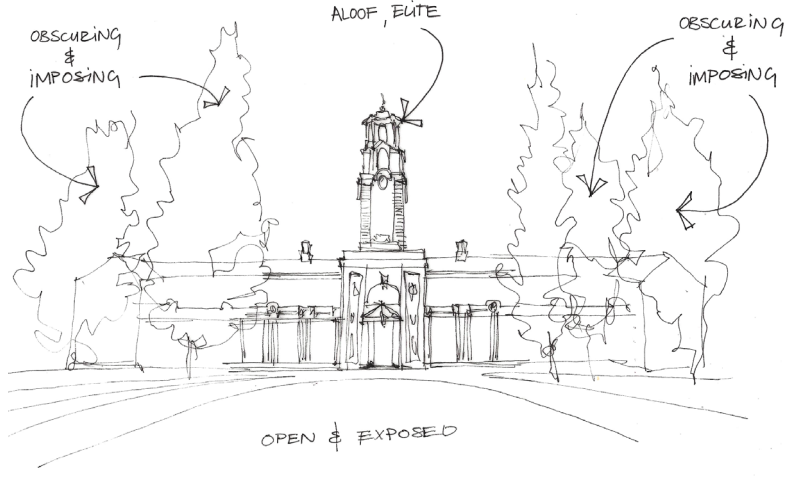



Fig. 2.6.1.16
*Perspective of the east façade and garden.* Sketch.

Fortunately, there is also an example of a threshold that speaks: the main courtyard (see fig. 2.6.1.17). In this space there is a moment of intimacy, where the thing is drawn close enough to the world that the dif-ference makes one aware of the being of thing and the being of world. As visitor, awareness of the large sky above is emphasised by the surrounding thing(colonnade) that blocks off all other parts of the world. Because the blue sky above is the only part of the world experienced, awareness of the visitor's being within the thing is heightened. So, the thing bears the world and the world bears the thing in a threshold where the intimacy between the two results in an awareness of how there is a dif-ference and the being of both is better understood.

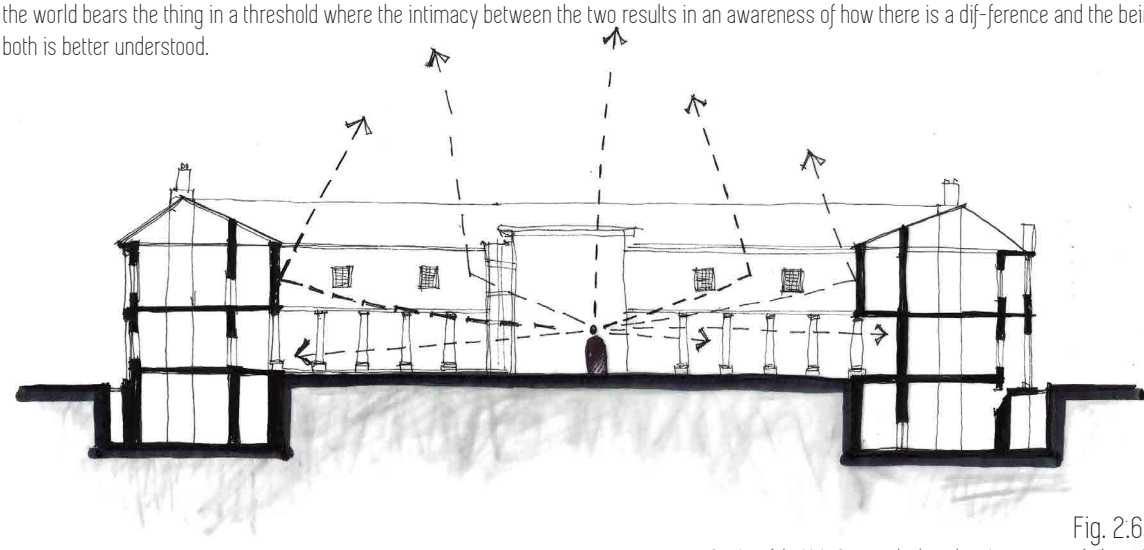


Fig. 2.6.1.17
*Section of the Main Courtyard, where there is a moment of silence.* Sketch

## Aspect 4 - Bidding by stilling:

A *Winter Evening* exploration:

Within this threshold, Heidegger identifies silence as the nature of this threshold. "The carrying out of world and thing in the manner of stilling is the appropriative taking place of the dif-ference." (Heidegger, 1951: 205). The dif-ference calls the world and thing to simply exist in the moment of intimacy and to measure their own existence to the existence of the other. By stilling world and thing, each step into its own being and this moment is language speaking most clearly "as the peal of silence. " (Heidegger, 1951: 205). The dif-ference therefore bids by stilling the bidden.

What this means is that there is a stillness or metaphorical silence in the threshold. The silence of such spaces is what makes it possible for both the world and things to measure their being. This is a very valuable idea. It could be said that we lack awareness of our being and the phenomena around us, because we are constantly overwhelmed by the 'noise' of existence. A threshold that provides a moment of silence allows us, mortals, as part of the world to measure our being (existence) against the being of other things and the rest of the world (see fig. 2.6.1.18). Within the quiet threshold, therefore, the greatest revealing takes place.

This silence in the bidding of speaking is thus a part of language, which is more than human speech. Human speech, written or spoken, is an uttering which will break the bidden stillness. Human speech is not language itself, but rather something in relation to the speaking of language (Heidegger, 1951: 205-206). The breaking of silence is understood because of the stillness that precedes it. There is thus a response to the stilling and speaking of language.



Fig. 2.6.1.18
Unknown. s.d. *A doorway as a threshold and a moment of silence in-between spaces.* Photograph. (Pinterest - https://za.pinterest.com/pin/591238257304918220/ )

## *Dennebosse* exploration:

This stillness of the threshold is also apparent in *Dennebosse's* threshold

'n Blou nabye heiligheid
wat tussen see en hemel staan,

In these two lines, there is a silence, where nothing happens other than that the world and the thing has been gathered together to exist side by side. This is articulated by the word *staan* (stand). The divine just stands in-between the forest and the heavens. It does nothing else but exist in this space. This simple existing is what allows the reader to become fully aware of its being. The threshold has created a moment of silence for the unconcealing of being.

## Architecture exploration:

These moments of silent thresholds also exist in architecture. The main courtyard of the Old Government Building demonstrates this. Both thing and world can simply exist in the stillness, being different and yet each bearing the other. The visitor can stand within this space and find that both the sky and the heritage building are also within this threshold. This becomes a principle which can be applied to the new expansion, as a moment of stillness within the design will allow the visitor to appreciate the heritage building. If the new contemporary literature wing can respect the 'peal of silence', a threshold between the old and new can be created that appreciates the being of both. This can become a moment of stillness that listens to the old before the new responds. Such a design recognizes the revelation borne by the stillness. Appropriate speaking comes from a listening to and accepting of the stillness i.e. an understanding of the intimacy of the between, an understanding of place.

A good architectural example of this is Renzo Piano's expansion of the Morgan Library. Piano's three new 'pavilions' occupy the space in-between the three historic buildings. He is thus occupying the threshold between the things, or historic buildings. The pavilion that acts as the new entrance draws the people from the street into this threshold, and the triple volume verticality of the new 'plaza' at the back gathers the sky and the divine from above (see fig. 2.6.1.19). Piano's intervention shows an understanding for the place and creates a threshold space where the different things and the world can exist in an intimacy. Moreover, the space that he has created respects and amplifies the silence of this moment. In a sense Piano breaks the silence, by creating an even greater silence.



Fig. 2.6.1.19
Unknown. s.d. *Morgan Library addition - triple volume roof gathering mortals upward to the sky.* Photograph. (ArchiEXPO: http://www.archiexpo.com/prod/josef-gartner/product-58213-387773.html)

# Aspect 5 - Speaking and responding:

## *A Winter Evening* exploration:

The next aspect of speaking is concerned with what happens after the silence, after there has been an understanding of the being of world and things. In *A Winter Evening*, the "limpid brightness" could be considered the response to the wanderer's pain that was revealed in the threshold. When the outside world came inside to be with the things and the pain of the wanderers is embodied in the stone of the threshold, there was a silent moment of revelation. This silence is then broken by the clear light, shining to reveal the comfort that is offered to the wanderer.

## *Dennebosse* exploration:

The last two lines of *Dennebosse* also breaks the silence with a response to the threshold that was revealed in the previous lines.

waaroor die groot, mistieke dans
van vreemde stille wolke gaan.

The dance of the clouds is observed and understood because of the quiet threshold that was described between the forest and the world. The last two lines are dynamic in comparison to the lines before. Opposed to the forest, sky and divine that are only standing together in the threshold, the clouds are dancing, breaking the silence. Yet, this response is not insensitive as one might expect. Rather the response of the clouds could seem appropriate, in that it articulates and even celebrates the quiet of the landscape behind it. At the same time, the nature of the clouds, their being, is also understood more deeply. There is a clear link between the silence and the breaking of the silence.



Fig. 2.6.1.20
Ziegler, K. 2014. *New impressions, fresh thought*s. Photograhp. (flickr website - https://

## Architecture exploration:

This aspect of the response touches on the idea of the dialogue. Responding requires a listening and accepting of the stillness. This links to the dialogue that will exist between the heritage building and the new additions. It is the reason why the nature of speaking and language is investigated, to understand how to respond to the heritage building. Through this we learn to "live in the speaking of language." Language speaks and a mortal "speaks only as he responds to language." (Heidegger, 1951: 206-207). Thus, understanding how language speaks indicates how mortals can respond. The language of architecture is a form of mortals responding to the existing voice of the place.

## The importance of place:

The speaking of language and the response of mortals through the language of architecture also occurs in a location or place. This place is specific and physical. The speaking of language in this place means that place always has a voice. Christian Norberg-Schulz considers place to be "an integral part of existence," and this is because every place has a voice (Norberg-Schulz, 1996: 414). This is important because any response by mortals must recognize this voice of place.

Works of architecture are phenomena that occur in a specific place. The place has a voice and any new architectural design will become a response to this voice. The Old Government Building and the new design proposal is an example of this. There are already existing thresholds and moments of silence in the Old Government Building. The new design proposal should recognize and then appropriately responds to this silence. This can be done using the language of architecture.

# The language of architecture as response:

Heidegger successfully demonstrates language as a speaking and that mortals speak in response to this through his analysis of *A Winter Evening*. This has been explored further by looking at *Dennebosse* and architecture. The five aspects of the speaking of language can be identified in architecture. We now know that Architecture also speaks and that it speaks in response to the voice of place. What remains to be explored is how the speaking of architecture uses the language of architecture.

Norberg-Schulz takes Heidegger's idea on language and applies them to architecture, revealing architecture as a language responding to the voice of place. In Concept of Dwelling he writes:
"Together built form, organized space and building types cover the aspects and modes of dwelling and thus constitute a 'language' of means which may satisfy the need for gathering the 'multifarious between.' We may call the study of the three interdependent constituents of language of architecture morphology, topology and typology." (Norberg-Schulz, 1985: 26).

Through these three constituents, architecture responds to the voice of the place. This response again gathers world and things to the in-between and is therefore a type of language.

This language of architecture consists of three components: topology, typology and morphology. These three components form a methodology for producing architecture that responds appropriately to the voice of the place. They will be investigated to demonstrate how the language of architecture can be "set into work" (Norberg-Schulz, 1985: 26).

## Topology:

Topology is the most obvious response to the voice of place, as it is the spatial organization of landscape. This refers to quantitative and qualitative spatial organization (Norberg-Schulz, 1985: 27).

An appropriate response requires an understanding of the voice of the place. Through analysis, the being of place is understood and then an appropriate topological response can be made, using the spatial organization components of centre, path and domain (see fig. 2.6.1.21). These responses provide an order, which allows for a clearer understanding of the space within which the gathering of world and thing takes place.

This spatial quality of place is expressed vertically through its relation to the sky and horizontally in terms of its relation to the earth. It is these two elements that connect the organized space (topology) with the built form (morphology), as both components have a vertical and horizontal relation to place.

## Typology:

Typology is concerned with the way in which the different modes of dwelling manifests itself, using a multitude of universal meaningful identities, which are translated into images or figures (Norberg-Schulz, 1985: 29). It is based on the idea that dwelling is not just an endless progression of different ways of dwelling, but that there is a unique type, an essence, a way of being, that must be understood to truly dwell appropriately within the gathering of the world. Typology is a form of the archetypal image.

An archetypal image is an "original notion or image from which other forms might be contrived." It therefore possesses a "deeply rooted" meaning (Porter, 2013: 8). An archetype is the manifestation of universal identities (see fig. 2.6.1.22). It reveals the "basic life situation" or essence of dwelling and it does this on all the different scales of architecture (Norberg-Schulz, 1985: 29). It establishes the general ideas of built form(morphology) and spatial organization (topology) and so becomes the foundation for the language of architecture.

This understanding of typology relates to Heidegger's understanding of language as something that discloses the basic structure of being, the way in which man dwells on earth under the sky (Norberg-Schulz, 1985: 29). As the foundation of the language of architecture, understanding typology is essential to formulate an appropriate architectural response to the voice of the place. It allows for the setting-into-work of the language of architecture.

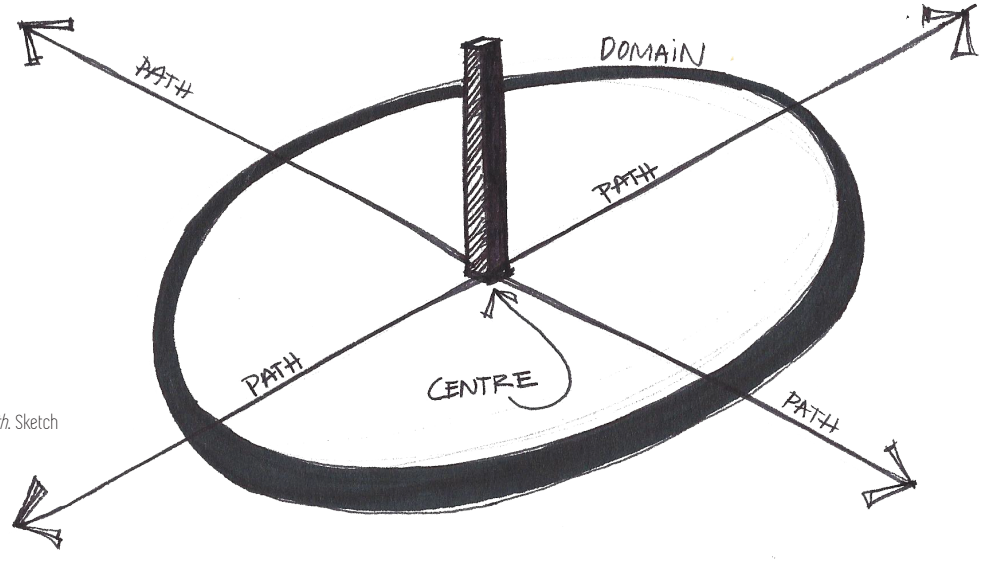



Fig. 2.6.1.21
*Centre, domain and path.* Sketch

This setting-into-work is a two-fold process. The first part is identifying the typology. Typologies reveal the language of architecture that "contains the original 'memories' of mankind. Life, however, takes place in time, and demands our understanding and participation. It is complex and transient and would remain meaningless and intolerable, if it were not related to what is general." (Norberg-Schulz, 1985: 29). Typology is what relates the new work of architecture to the more general essence of dwelling.

If we forget what the archetypes say we will suffer "a loss of dwelling, as a belonging to and a participation in a meaningful totality " (Auret, 2015: 117). The archetypes exist within the stillness of the gathering between, quietly repeating universal, timeless ways of being.

The second part of setting-into-work is to modify what is general, to respond to the voice of the specific place. External circumstances of the place change the archetype without altering its identity or essence (Norberg-Schulz, 1985: 29). This is the connection between topology and typology. Spatial orientation within a place influences which typology communicates with which essence of dwelling. Thus, there is an understanding of both the essences of being (typology) and the being of the specific place (topology), through a stillness that allows both to be. The image has been altered to convey its message in the current place, so that it's meaning can be understood.

It is a careful balance between avoiding the "loss of image" and ensuring the image conveys its message. The new intervention cannot be a mere copying of typologies because then the meaning of the image will not be carried across to the contemporary observer. Rather, that which is revealed about the typical way of dwelling, should also reveal the being of the specific place, which is in a specific time. This is achieved in the form of the new, where typology and topology is given voice through new form.



Fig. 2.6.1.22
Laugier, M.A. 1753. *The primitive cabin.* Picture. (Joan Pascual Ubalde website - https://joanpascualubalde.wordpress.com/inicio-4/marc-antoine-laugier-la-cabana-primitiva-1753/)

## Morphology:

Morphology is the how or the built form, which is an articulation of being between earth and sky, within the gathering of the fourfold. It is the way in which the built form stands, rises and opens. It is the form's properties such as texture, colour and light, as well as the structure or spatial boundaries of the built form. (Norberg-Schulz, 1985: 26-27). Morphology is concerned with the character of the form and how this character is an interaction or response to the voice of place.

## Morphology as Articulation:

What stands out from this understanding of morphology, when considering the language of architecture, is how the built form's response to the voice of the place is articulated. Articulation can be defined as "the expression of an idea or feeling in words, the formation of distinct sounds in speech or the state of being jointed," (Compact Oxford English Dictionary, 2008: 48). This refers to articulation in language or speech, but it can also be applied to the speaking of architecture, describing the distinctions made between different building elements at their point of connection. In the case of an extension to a heritage building, this also refers to the connection between existing and new. These connections become moments of poetic intensity.

Carlo Scarpa's Castelvecchio Museum is a good architectural example of this. Scarpa demonstrates how an understanding of place can be expressed through articulation of the many small responses his intervention makes to the historic building. Take for example the staircase design shown in figure 2.6.1.23. The stairs do not just come down in one continuous line. Instead, the last four steps turn and are no longer covered on the side as before. This moment, when the visitor is still on the new stair, but just about to move onto the floor of the heritage building, is articulated. There is a breath, a pause moment, where the old and the new are distinguished through the physical form of the stairs.

Articulation "is to clearly distinguish the parts that constitute the whole , especially at the points of their connection." It is an accentuation of each element's role (Porter, 2013: 9). This links back to Heidegger's understanding of the dif-ference, where the world and thing are drawn close in an intimacy, yet there is a distinct separation of the two, so that both can be understood in their own being. Just as articulation in human speech means to distinctly sound each word, making the message clearer, so articulation in architecture's speech happens when clearer expression is given to the building components, clarifying their relationship to the whole and enhancing the overall speaking of the architecture. This is primarily done through the detailed design of the building connections and junctions, both on small scale, but also spatially as a single composition.

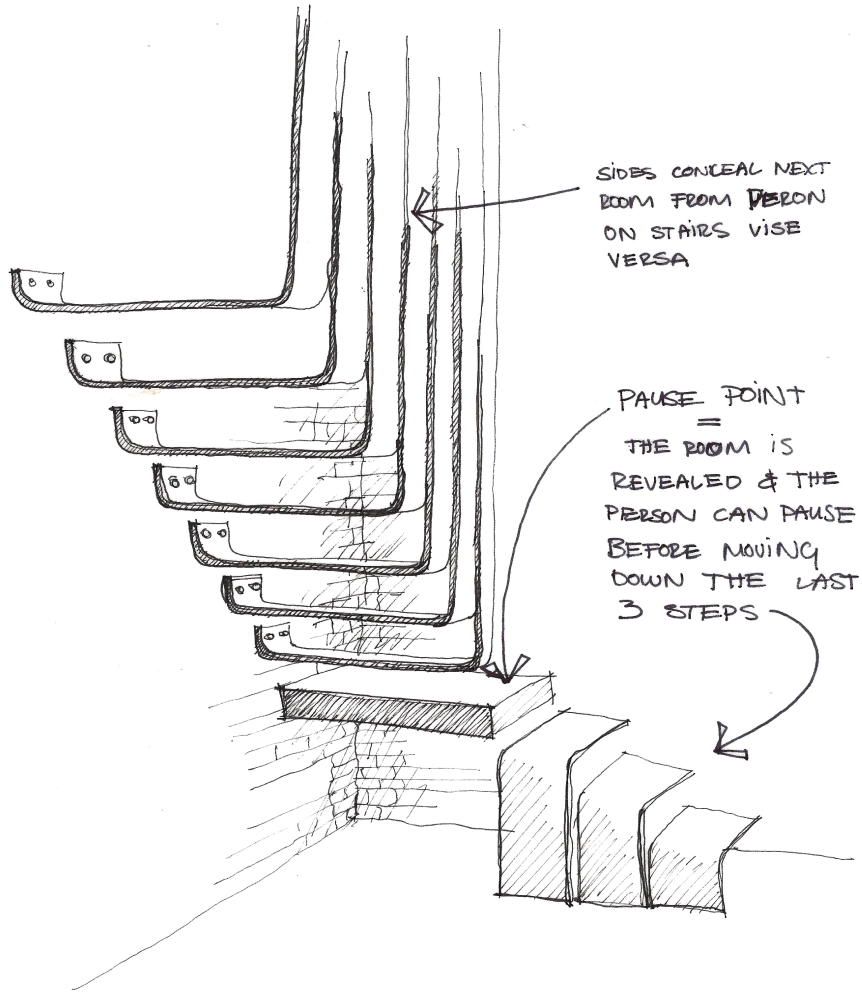



Fig. 2.6.1.23
*Staircase in Castelvecchio designed by Carlo Scarpa.* Sketch.

## The language of architecture as response in summary:

The language of architecture speaks in response to the speaking of language, calling the intimacy between the world and thing, bidding by stilling. It responds appropriately by means of morphology, topology and typology. Ultimately, these three components of the language of architecture becomes a figure that manifests a mode of dwelling, typically, locally and historically. This is the response. The last step is to make sure that this response is appropriate.

## An appropriate response - dwelling poetically:

The language of architecture is composed of topology, typology and morphology, all of which must respond to the voice of place and reveals the world as it is. This revealing is achieved when mortals dwell poetically. "Man dwells poetically when he is able to 'listen' to the saying of things, and when he is capable of setting what he apprehends into work by means of the language of architecture." (Norberg-Schulz, 1985: 30).

What does it mean to dwell poetically? It means to respond as the poet would. Heidegger explains that as "[t]he age for which the ground fails to come hangs in the abyss, it is necessary that there be those who reach into the abyss" (1946: 90). These who reach into the abyss are the poets (see fig. 2.6.1.24). This reaching describes the tension that exists between the quiet and venturesome poet, who must have the foresight of revelation and yet, relevance, so that the message is not lost. The poet is only one breath before the others. The architect must be the same. As Pancho Guedes said: "I claim for architects to have the same rights and freedom painters and poets have had for so long." (Guedes, 1962: 12).

If the appropriate architectural response is like the poetic response, then it must demonstrate the same tension between relating to the existing and reaching forward to the new. It thus becomes as "unconcealing as the poetic act." (Nesbitt, 1996: 494). If contemporary literature is moving forward and Afrikaans speakers are listening to this language in a new way, then the architecture of the new contemporary literature wings becomes a threshold within which this transformation can take place. This will be the appropriate setting-into-work of the architectural language, in a response

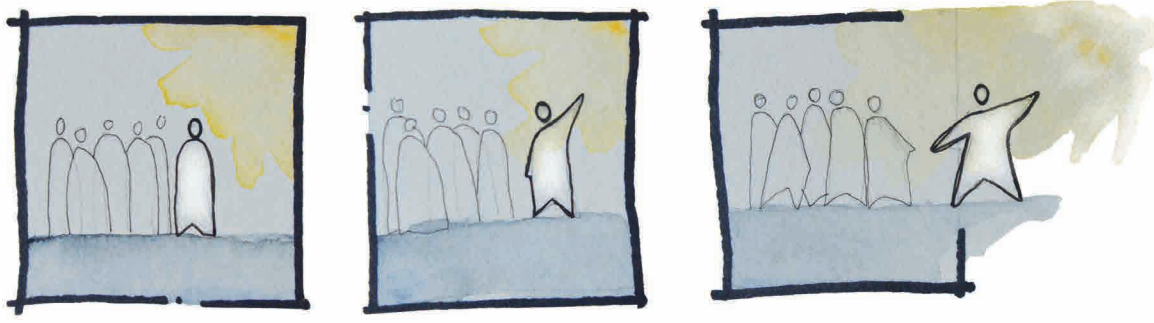


Fig. 2.6.1.24
*The poet reaching out into the abyss.* Sketch.

## Conclusion:

What should this new design proposal say about heritage?

It has been established that language is the core of this theoretical discourse. Language speaks in that it bids things, it bids the world and it bids the intimacy between their being. Herein there is a stillness to which mortals then respond. It has also been explained how architecture is such a response. It responds through the speaking of architecture, using the language of architecture. What is crucial is that this response must be appropriate i.e. in response to the voice of place. This means that the question must be rephrased to ask:

What would an *appropriate* response to the heritage be?

The answer to this can be found in an understanding of what it means to dwell poetically. This is to reach forward to reveal the new, but to still relate to the old. If this intervention is to be an appropriate response, it must engage with and even embrace this tension between listening to the 'stillness' of the existing heritage and the pull of contemporary architecture and Afrikaans propelling itself forward.

2.6.2

# Investigating a variety of responses

# Castelvecchio Museum

Location: Verona, Italy
Architect: Carlo Scarpa

Completion: 1974

## Lessons learnt:

- Light connections.
- Balance between old and new, new voice does not seek attention or shout.
- Layering of new roof under existing.
- Circulation becomes part of exhibition.
- Sensitivity of new interior stairs.
- Dark spaces with single natural light sources through wall openings.

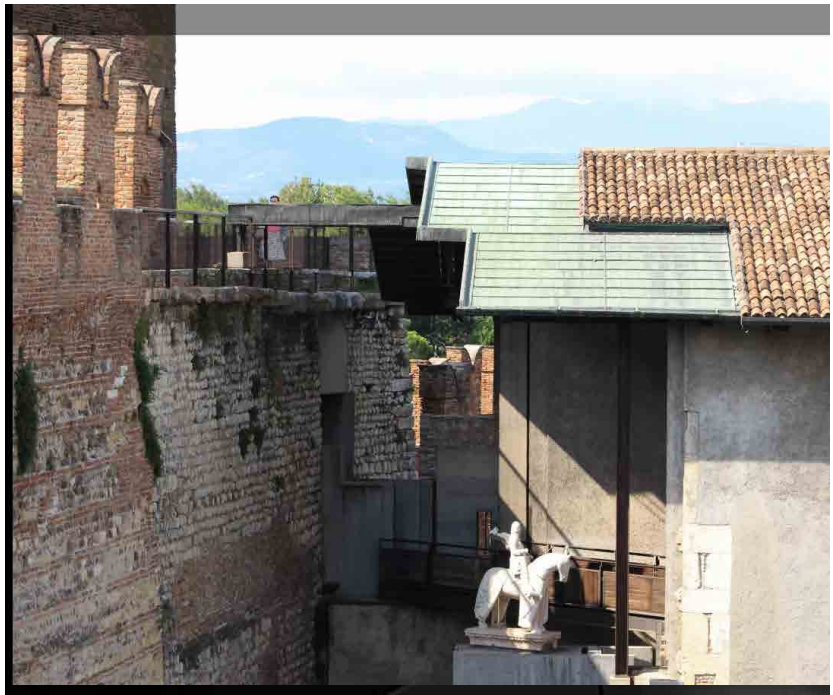


Fig. 2.6.2.1
Puggioni, F. s.d. *Roof of Castelvecchio* . Photograph. [ divisare - https://divisare.com/projects/332703-carlo-scarpa-federico-puggioni-museo-di-castelvecchio]



Fig. 2.6.2.2
Puggioni, F. s.d. *Windows at Castelvecchio - diffused light.* Photograph.[ divisare - https://divisare.com/projects/332703-carlo-scarpa-federico-puggioni-museo-di-castelvecchio]

## Documentation Centre Nazi Party Rally Grounds

Location: Nuremberg, Germany
Architects: Günther Domenig

Completion: 2001

## Lessons learnt:

- Small but sharp incision on façade, hides true scale of intervention.
- Aggressive form not appropriate for a literature museum.
- Lightweight volume suspended within/over existing.
- Walkway cutting through courtyard engages and challenges existing.

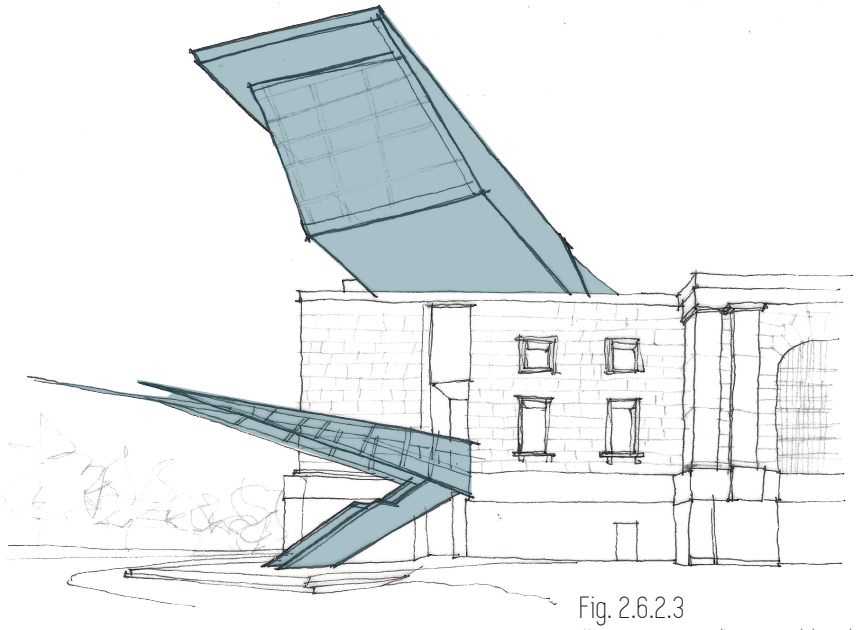


Fig. 2.6.2.3
*New entrance protruding over and through the historic building.* Sketch

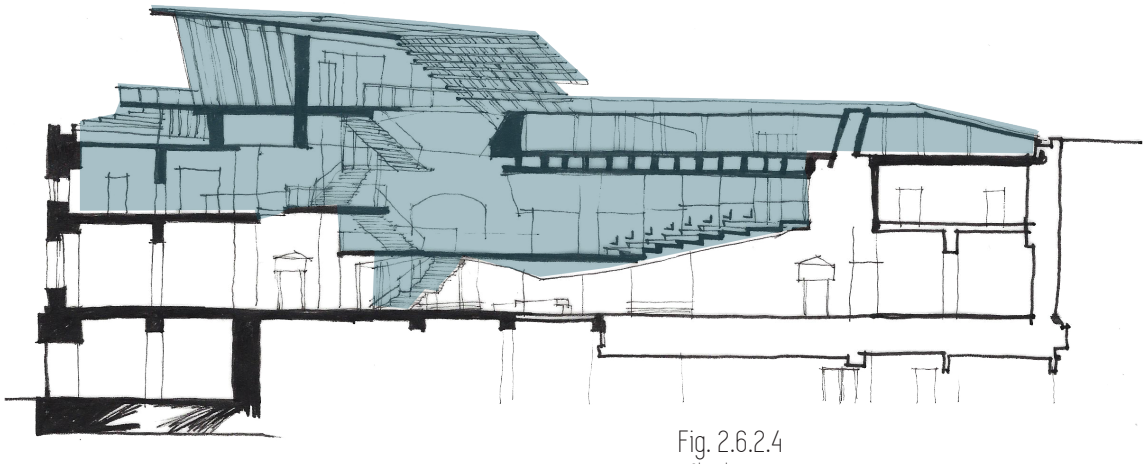


Fig. 2.6.2.4
*v* Sketch.

# Hedmark Museum

Location: Hamar,Norway
Architects: Sverre Fehn

Completion: 1967-2005



## Lessons learnt:

- New lightweight structure sits within existing, with columns coming down behind external walls.
- Clear distinction between existing and new through material.
- Entrance ramp demonstrates understanding of the historic voice of the place.

Fig. 2.6.2.5
*Structure sitting within the historic building.*
Sketch,



Fig. 2.6.2.6
Binet, H. 2009. *The barn form of the museum sits atop the mediaeval castle ruin.* Photograph.( architecture norway -http://www.architecturenorway.no/stories/photo-stories/binet-hamar-09/)



Fig. 2.6.2.7
Binet, H. 2009. *Ramp through the west wing.* Photograph.( architecture norway -http://www.architecturenorway.no/stories/photo-stories/binet-hamar-09/)

# Jewish Museum Berlin

Location: Berlin, Germany
Architects: Daniel Libeskind

Completion: 2001

## Lessons learnt:

- Underground connection to existing.
- Hidden visitor entrance challenges old.
- Meaningful route as part of exhibition.
- Spatial quality conveys meaning as part of exhibition.
- Aggressive form not appropriate for literature museum.
- Not a transformation, but two different things.
- Lines from context inform form-giving.

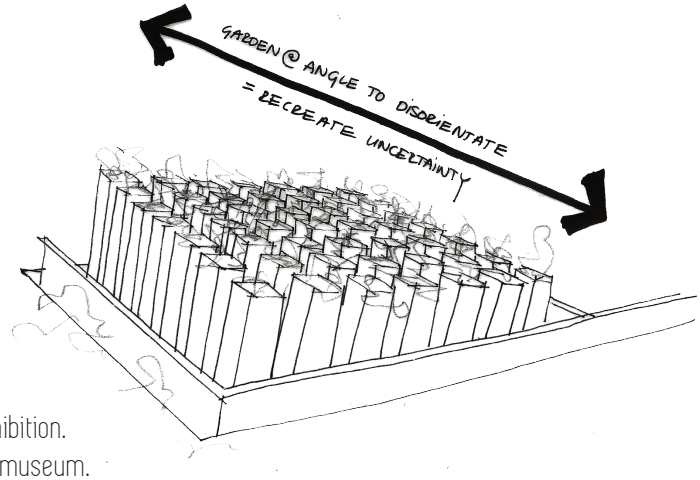



Fig. 2.6.2.8
*Memorial space interacting with body movement.* Sketch

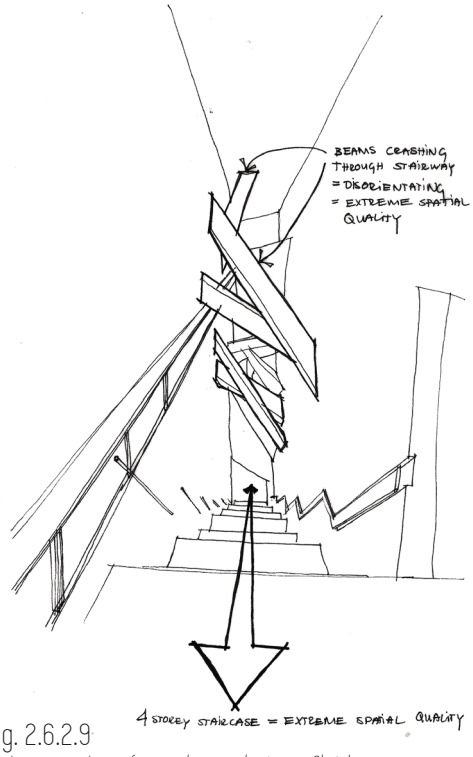



Fig. 2.6.2.9
*Stair case coming up from underground entrance.* Sketch.

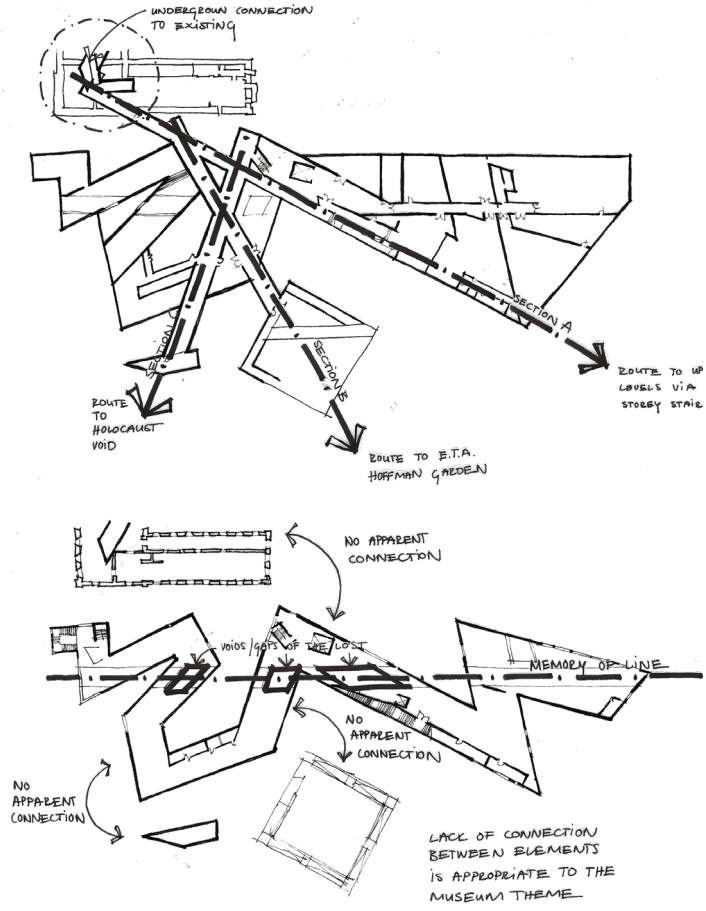



Fig. 2.6.2.10
*Analysis of the underground entrance and route.* Sketch.

# CiaxaForum Madrid

Location: Madrid, Spain
Architects: Herzog & de Meuron

Completion: 2007

## Lessons learnt:

- Extension of roof in new material and form.
- Closeness of detail between gables and new extension.
- Irregular planes on interior interact with light and create interesting spatial experience.
- Cladding is perforated towards top - disintegrates.



Fig. 2.6.2.11
Unknown. s.d. *Ciaxa Forum main entrance facade.* Photograph. *(archtalent - http://www.archtalent.com/es/proyectos/caixa-forum )*



Fig. 2.6.2.12
Unknown. s.d. *Ciaxa Forum's new roof disintegrating towards the top.* Photograph. *(archtalent - http://www.archtalent.com/es/proyectos/caixa-forum )*

## Nelson-Atkins Museum of Art

Location: Kansas City, USA
Architects: Steven Holl Architects

Completion: 2007

## Lessons learnt:

- Connection from street entrance through to existing building and courtyard.
- Progression from street level to underground, to courtyard, to large double volume interior.
- Solidity of existing contrasted with lightness of new.
- New is mostly underground with fragmented protruding elements aboveground.
- Respect old - still part of street view.
- Frame existing with new.
- Interior of new plays with double volumes and translucent light-quality.

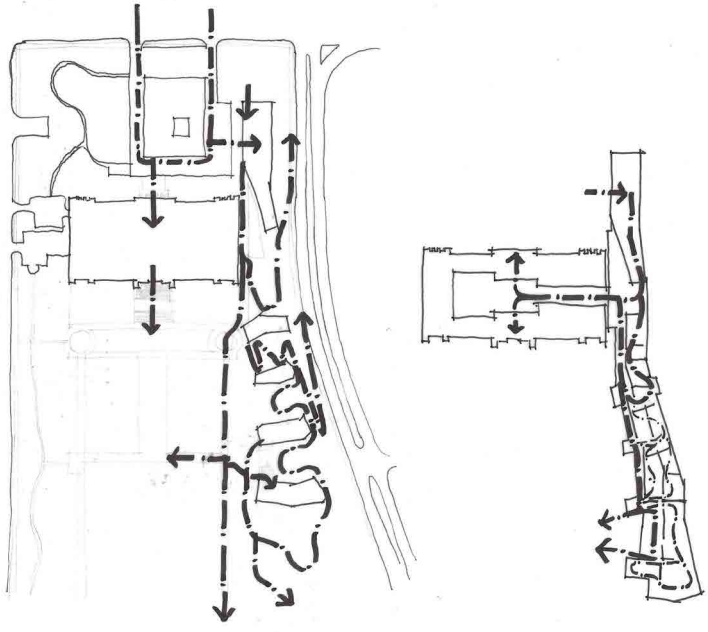


Fig. 2.6.2.13
*Analysis of connection to historic building underground.* Sketch.

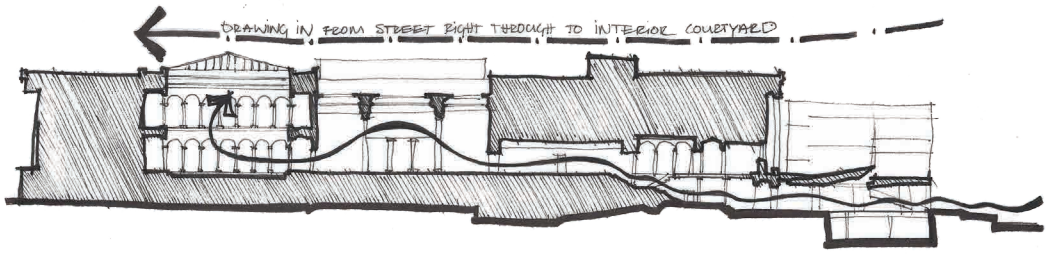



Fig. 2.6.2.14
*Section of the underground entrance and route.* Sketch.

# 2.7 Tectonics

## 2.7.1 Structural Philosophy

In the theoretical discourse (section 2.6.1), morphology is identified as a constituent of the language of architecture. The discourse also identifies articulation as an important part of the morphology. Through articulation of the form-giving, the relationship between morphology and tectonics becomes clear. The structural detail offers an opportunity to physically express the meaning behind the proposed morphology. The detail can become poetic expression of the overall intention of the design. In this project, the morphology is primarily concerned with the way the new responds to the old and the connection that is made in-between them is very important. This challenge becomes the starting point for the structural philosophy.

Tectonics and articulation through the detail:

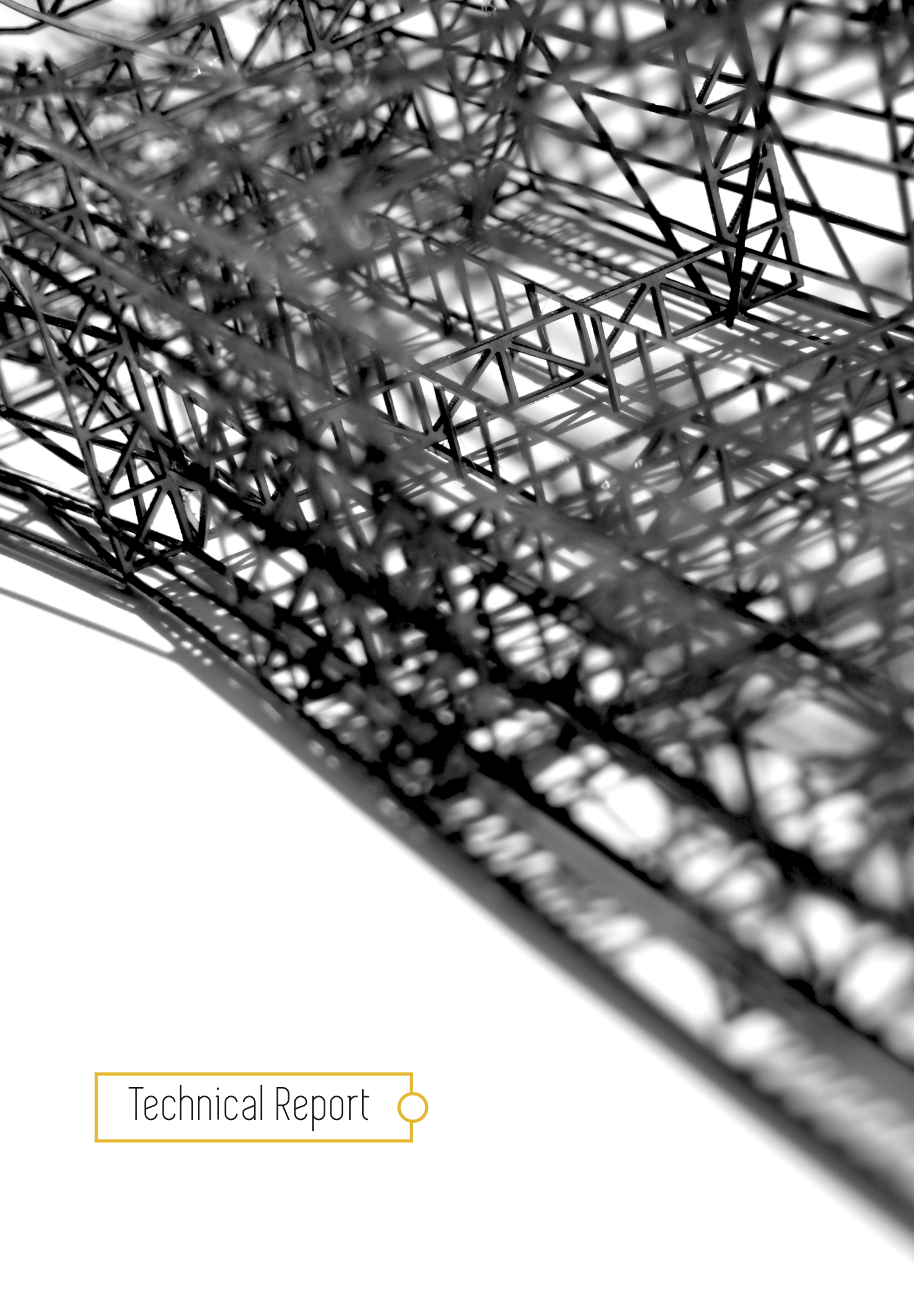
Tectonics can be a very general term in the architecture profession. "[L]ocated within tectonics is an endless set of architectural ideas." (Nesbitt, 1996: 498). What then are the specific ideas relevant to this dissertation? The morphological discourse established that the form-giving is centred around the connection between the existing and the new, and the architectural articulation of this connection. The dialogue between the old and new is at the core of this investigation and should therefore be at the core of the tectonic investigation on a theoretical-basis. "Details are much more than the subordinate elements; they can be regarded as the minimal units of signification in the architectural production of meanings." (Frascari, 1996: 500). This means, the architectural detail can be meaningful, by articulating what the morphological response of the new wishes to say in the dialogue. In tectonics, this dialogue is expressed through the structural detailing on various scale levels.

The detail in architectural design is very important. A good architectural detail considers both structural integrity and poetic expression. In other words, the aesthetic communication of the detail is as important as its physical practicality. "Careful detailing is the most important means for avoiding building failure, on both dimensions of the architectural profession - the ethical and the aesthetic. The art of detailing is really the joining of materials, elements, components and building parts in a functional and aesthetic manner." (Frascari, 1996: 501). The structural detail is concerned with connection, just as the conceptual approach was concerned with connection. The structural philosophy of this intervention was also concerned with connection that support the morphology's conceptual approach.

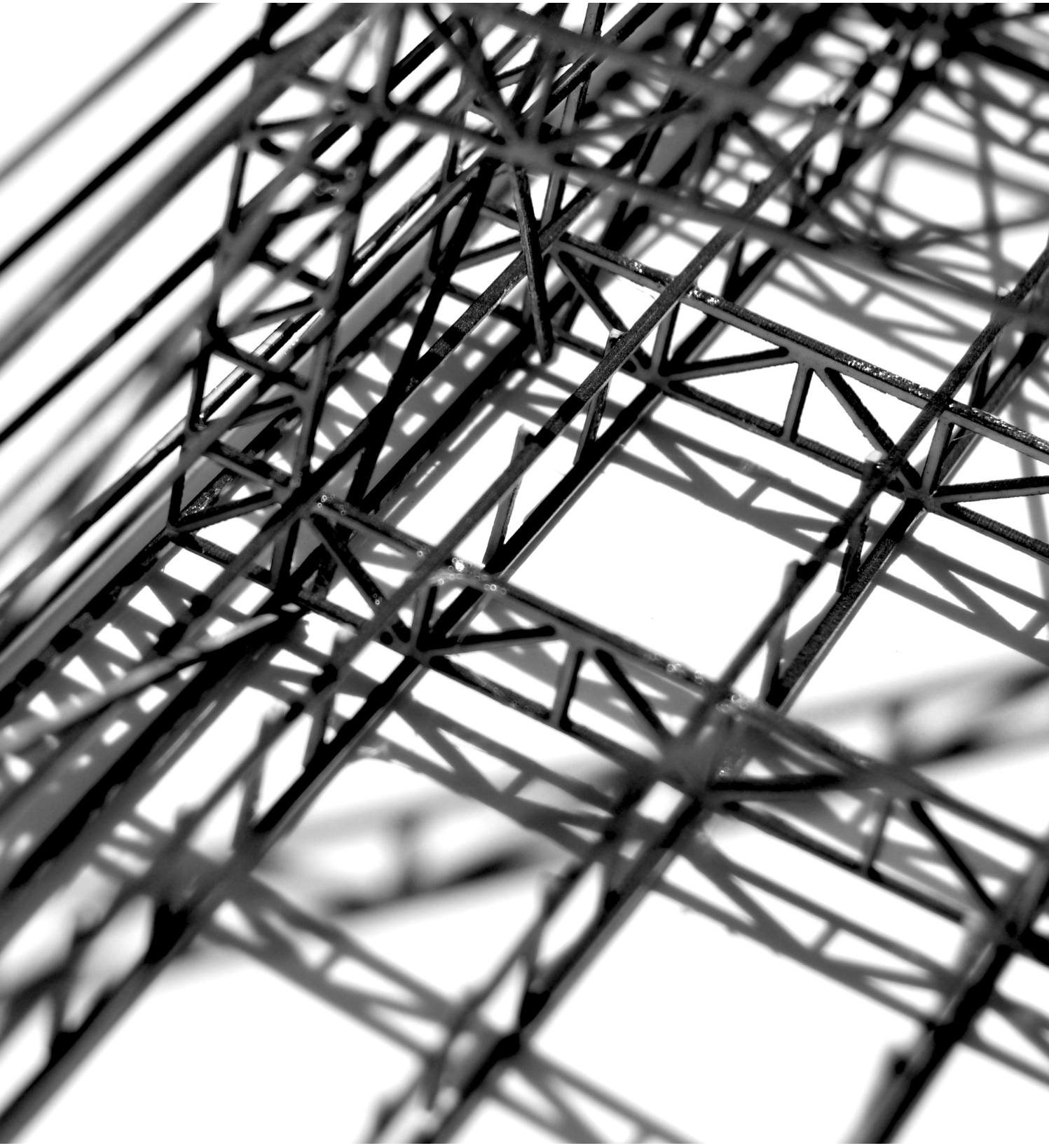
These architectural details can be considered at different scales. From small material connections to larger urban connections, each in-between moment becomes a line in the dialogue of the intervention as a whole. The architectural details "are composed in different scales in the attempt to single out the dialogue among the parts in the making of the text of the building." (Frascari, 1996: 502). Each type of connection that exists in the proposed design should be considered an opportunity to articulate the main conceptual approach of the project.

This conceptual approach is that the existing form transforms into a new form and that there is a change, but it is also still true to the single original. The structure of the new intervention will not be the same as the existing. This is out of respect for the existing: a steel structure that sits behind the existing preserves the facades and does not burden the existing structure with its weight. The challenge is to join the two structures, so that it reads as a single structure that is transforming.

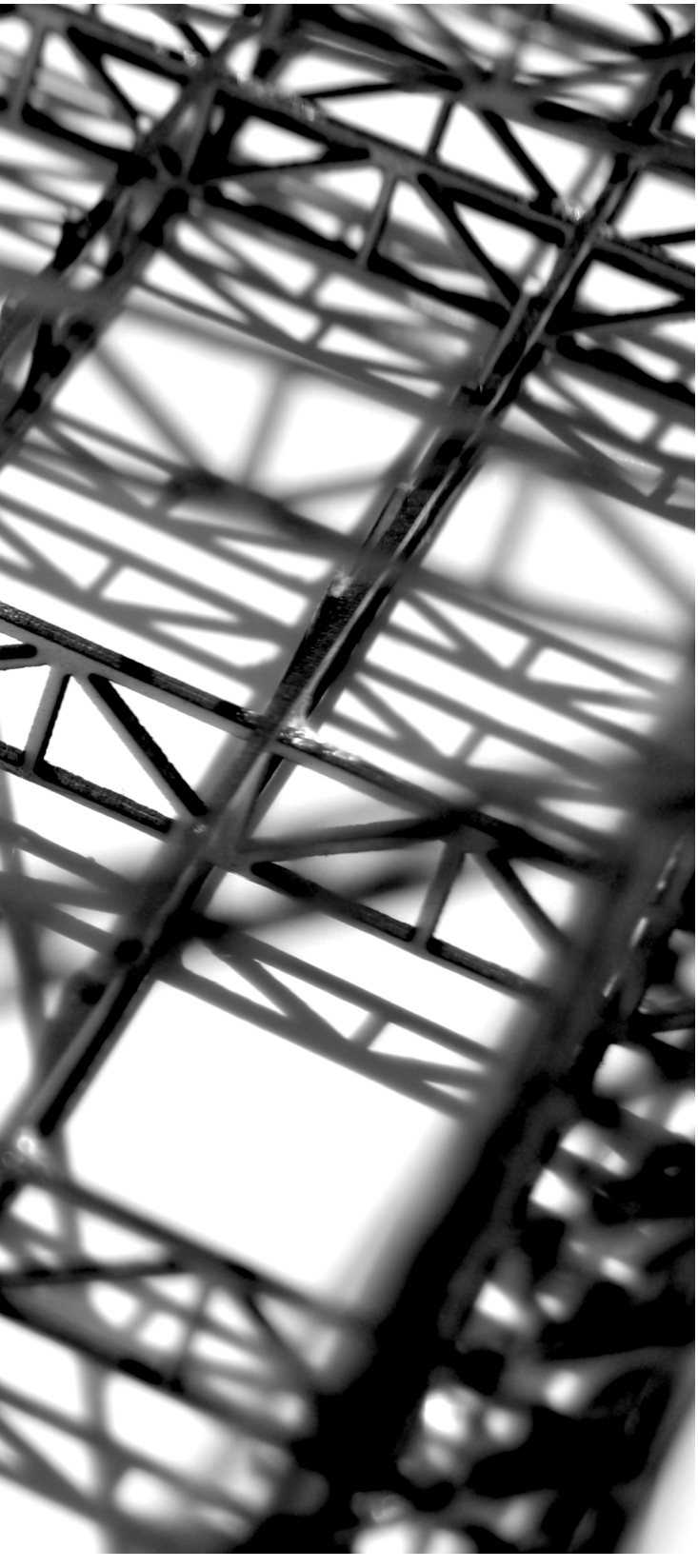
This will be achieved through the detailing of the connections between new and existing. "Detailing is, surely, one of the most revealing components of changing architectural language." (Gregotti, 1996: 496). A connection detail that therefore finds the balance between seamlessness and articulated difference, is the key to a successful interpretation of the proposed morphology.



# Technical Report



# Layout



00 Introduction [4]

01 Site analysis: [5]

01.1 Legal considerations
01.2 Climatic considerations
01.3 Soil conditions

02 Sustainability strategy: [10]

02.1 Building reuse
02.2 Urban heat island reduction
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03.1 Existing structural system
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05.1 Sub-structure
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# Introduction

The following report is an in-depth investigation into the numerous structural and technical challenges involved in the proposed design. This investigation is divided into a site analysis, sustainability strategies, the existing building structure, the function specific requirements and new structural systems. Though this investigation, all information necessary for the design development and technical documentation is gathered. It is important to demonstrate that the proposed design is structurally and technically viable.

## Summary:

### Topology
Old Government Building, President Brand Street, Bloemfontein

### Functional Typology
Museum and archive

### Morphology
Transformation of heritage building through new exhibition wing,
tower and underground archive.



# 1 Site analysis

## 1.1 Legal considerations

The site is locatedin the Bloemfontein CBD along President Brand Street, at the end of Charlotte Maxeke Street (historically known as Maitland Street). For a more in-depth analysis of the quantitative and qualitative nature of the site, refer to Part 02, section 2.4 of the main document.

Shown in Figure 1.1.1 is all the cadastral information of the site, followed by a table that specifies the requirements set-out in the relevant building regulations.

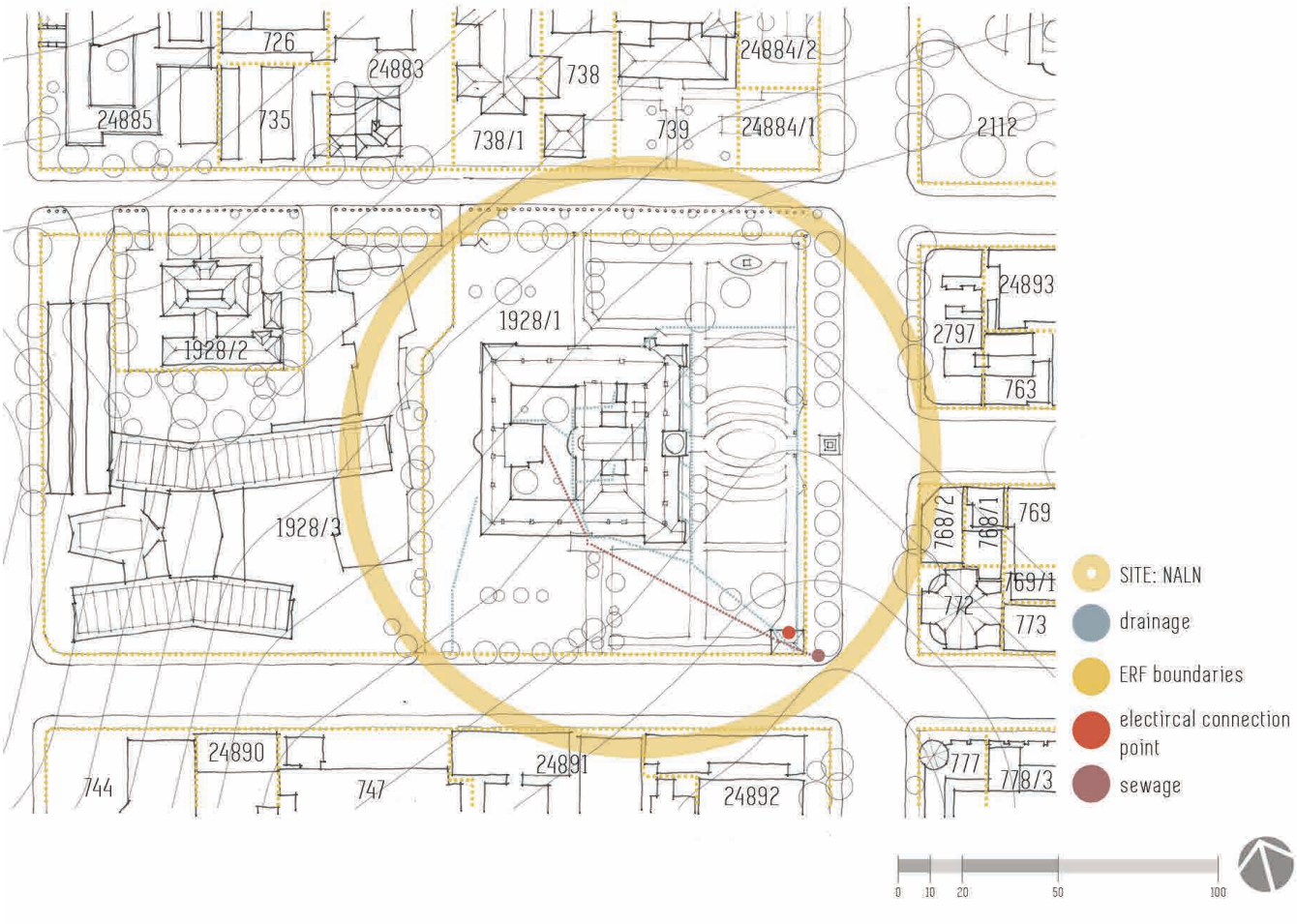



Fig. 1.1.1
*Cadastral map based on Surveyor General's drawings.* Image.

Table 1: Relevant building regulations

Legal Constraints:

| | |
|---|---|
| Erf no. | 1928/1 |
| Site Area | 4773.77 m2 |
| Town Planning Scheme | Bloemfontein town Planning Scheme |
| Use Zone | Public Building: Museum and libraries |
| Height restriction | None |
| Coverage | 50% permitted |
| Floor Area Ratio | 1:1 |
| Building Lines | 3.0 m from north, east and south site boundary |
| Parking | Museum and archive: 2 bays p/ 100m2<br>Offices: 2.5 bays p/100m2<br>Total required: 68 bays<br>Total provided: 90 bays<br>Total disabled bays required: 3 bays<br>Total disabled bays provided: 6 bays |
| Sanitary Fixings | Required:<br>Male:<br>WC: 8<br>U: 12<br>WHB: 11<br>Female:<br>WC: 18<br>WHB: 11<br><br>Provided:<br>Male:<br>WC: 10<br>U: 16<br>WHB: 20<br>Female:<br>WC: 29<br>WHB: 27<br><br>Disabled:<br>Required: 2<br>Provided 3 |
| SAHRA Heritage Register List: | President Brand Street: Conservation Area, Heritage area<br>Old Government Building: National Monument, Provincial Heritage Site (Grade II)<br>Historic Tree-garden: National Monument, Provincial Heritage Site (Grade II)<br><br>Documents for consideration: National Heritage resources Act 4 of 1999 and the Burra Charter (the Australian ICOMOS Charter for Places of Cultural Significance)<br><br>For in-depth conservation strategy, refer to section 2.4.5.3 |

# 1.2 Climatic considerations

According to the SANS 10400 XA, Bloemfontein is located in Climate Zone 1/Cold interior. (SABS Standard Division, 2011: p15-16). This means that the temperature varies from very cold in winter to very hot in summer.

Bloemfontein is a summer rainfall area, with a generally dry climate and a lot of sunshine (World Weather & Climate Information, s.d.: online). The sun angles in this area are 88° in summer and 44° in winter (see Figure 1.2.1). The size of the O.R. Tambo building on the west of the site, provides a large amount of protection for the building late in the day. Heat penetration from the north side needs to be addressed with sunscreens on the inside windows of the heritage building and UV protected glass in the new exhibition wing. The western façade of the new exhibition wing has no windows to reduce the amount of openings in the external skin. There is also insulation in the 800mm wide cavity of the cladding structure.

## Climatic designing considerations:

A literature museum and archive have very specific requirements regarding climatic conditions because paper is such a fragile material (Henderson, 2013: 6-7). The design must incorporate a means of regulating the extreme temperatures and dry air and as far as possible. This must be done in an energy efficient manner.

•An artificial ventilation system and humidifying system is necessary, and provision is made in the new basement for the necessary mechanical equipment.

•Natural sunlight must be blocked off from the interior exhibition and archival storage spaces. In exceptional cases where natural light is let through, this is filtered through UV-protection glass. This minimize the impact of sunlight on the exhibition content. Highly sensitive/ valuable materials are not displayed in these spaces.

•Placing the archive in an underground vault provides thermal massing i.e. passive design method for regulating temperature.

•Proper insulation of the new wing extensions is done, particularly as it sits on the west end of the site.

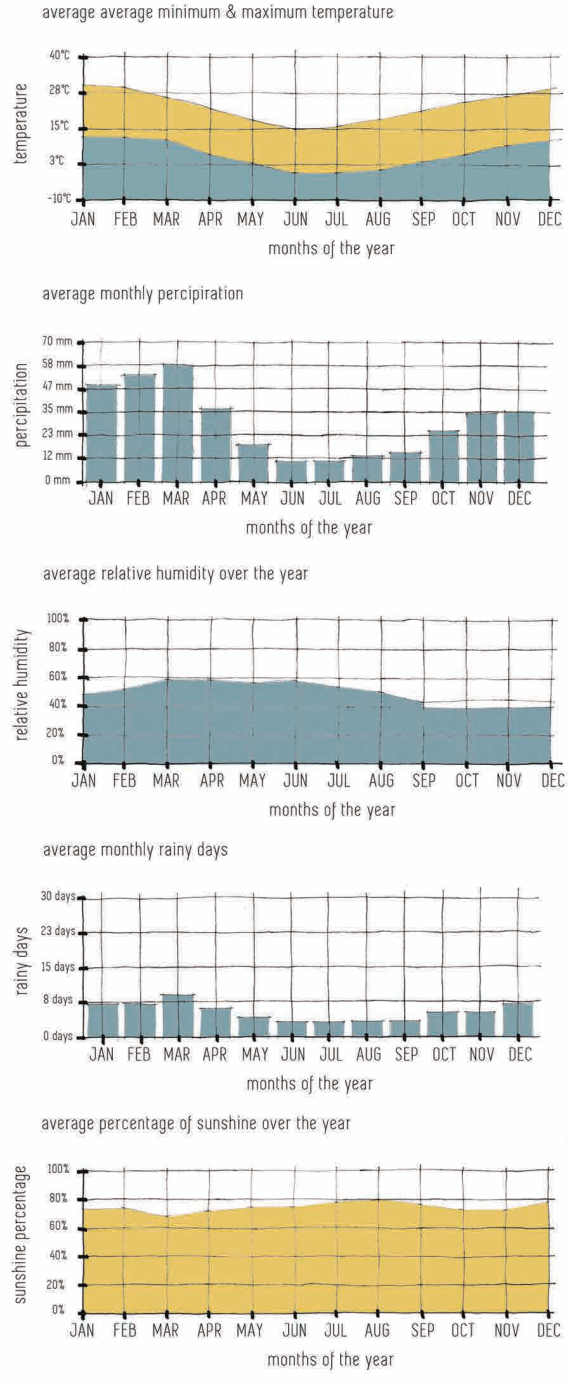



Fig. 1.2.1
*Sun angles in Bloemfontein.* Sketch.

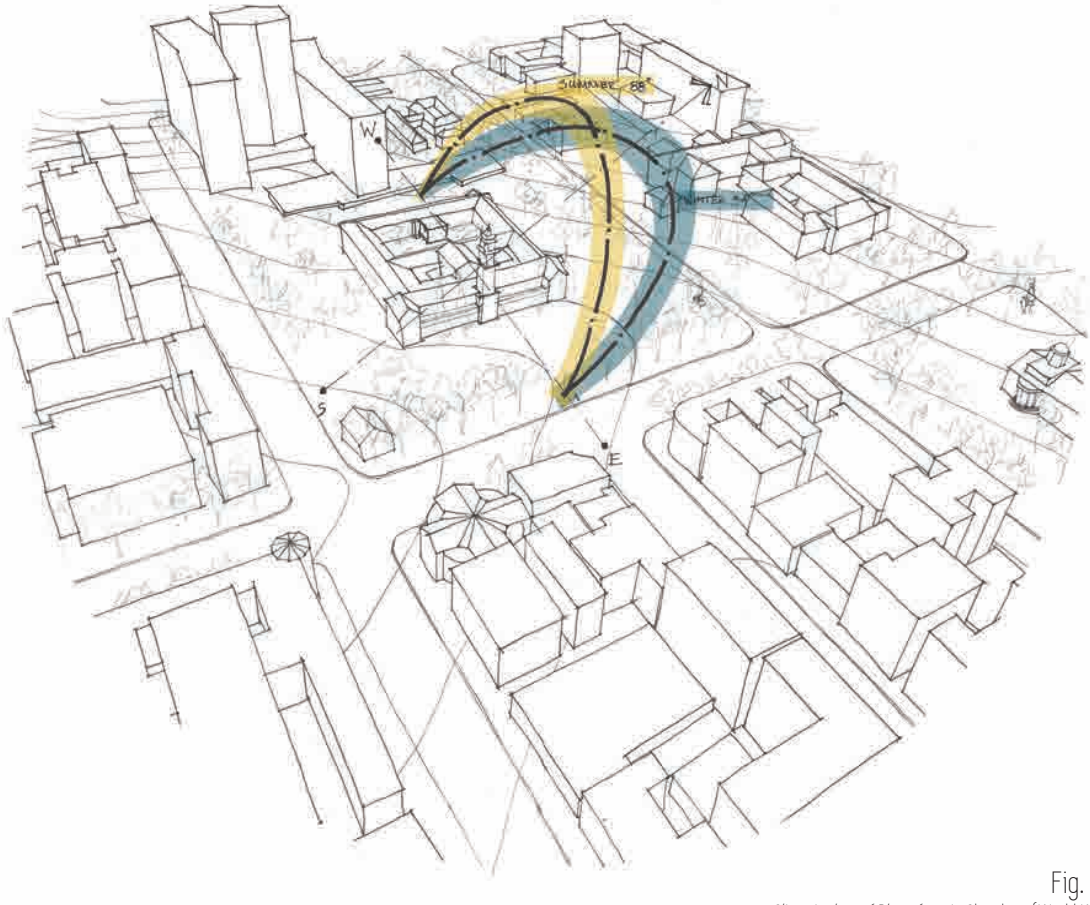



Fig. 1.2.2
*Climatic data of Bloemfontein.* Sketches. (World Weather & Climate Information - https://weather-and-climate.com/average-monthly-Rainfall-Temperature-Sunshine,bloemfontein,South-Africa)

# 1.3 Soil conditions

Bloemfontein in general has a dvark coloured margalitic clay soil (Soils: The Free State Agricultural Base, 2006: 14-15)and most sites in the city center are water-logged due to the proximity of the Bloem Spruit. The 2010 Roodt renovation (see section 2.4.4 of the main document) introduced a 1m wide drained cavity system with a sump to protect the existing basement structure of the historic building. A similar approach is taken to protect any new underground structures. This is called a Type C basement and will be discussed in greater depth in section 05.1 of the technical report.

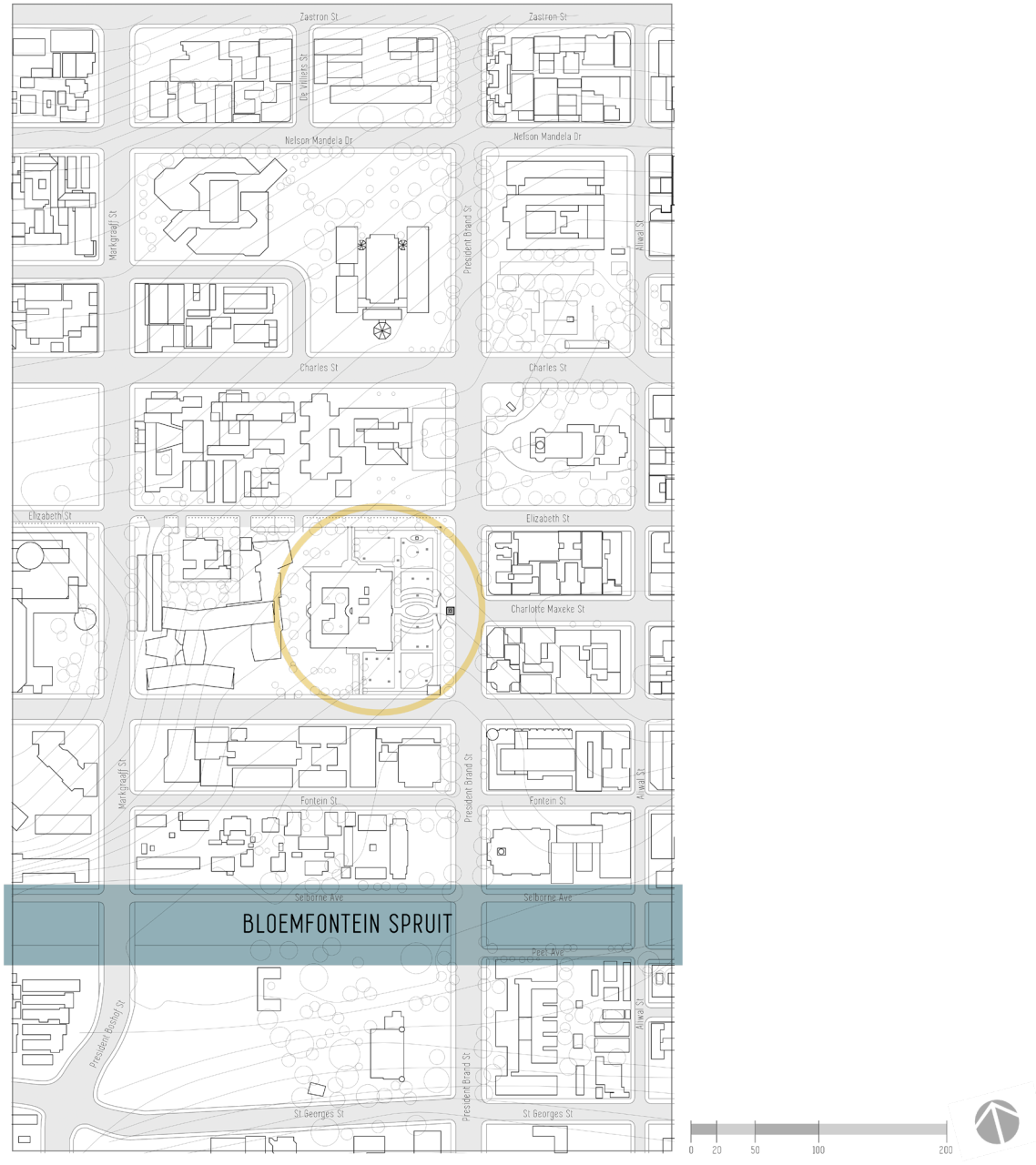



Fig. 1.3.1
*Proximity of the site to the Bloemfontein Spruit.* Sketch.

# 2 Sustainability strategy

## 2.1 Building reuse

By expanding and improving the existing museum and archive, instead of building a new facility, this intervention is already a sustainable approach to building. After all, "the greenest building is one that is already built" (Elefante, 2007: 26). The reuse of existing buildings is advantageous in that it conserves both the historic structure as well as the urban environment. Figure 2.1.1 illustrates the floor area of the existing building vs that of the new addition, showing that more than half of the project's entire floor area is already built.

Most of the existing structure is more than 100 years old (see section 2.4.4 of the main document) and was not designed according to today's energy-efficiency standards. As a protected heritage building, there are limitations to the changes that can be made (National Heritage Resources Act no.25 of 1999). Fortunately, the existing external walls (sandstone or brick of minimum 350mm thickness) provide good thermal massing.

To improve the energy performance of the existing building, the following must be considered:
•prevent heat loss by draft-proofing seals and insulation (Vieveen, s.d: 107)
•introduce energy-efficient lighting

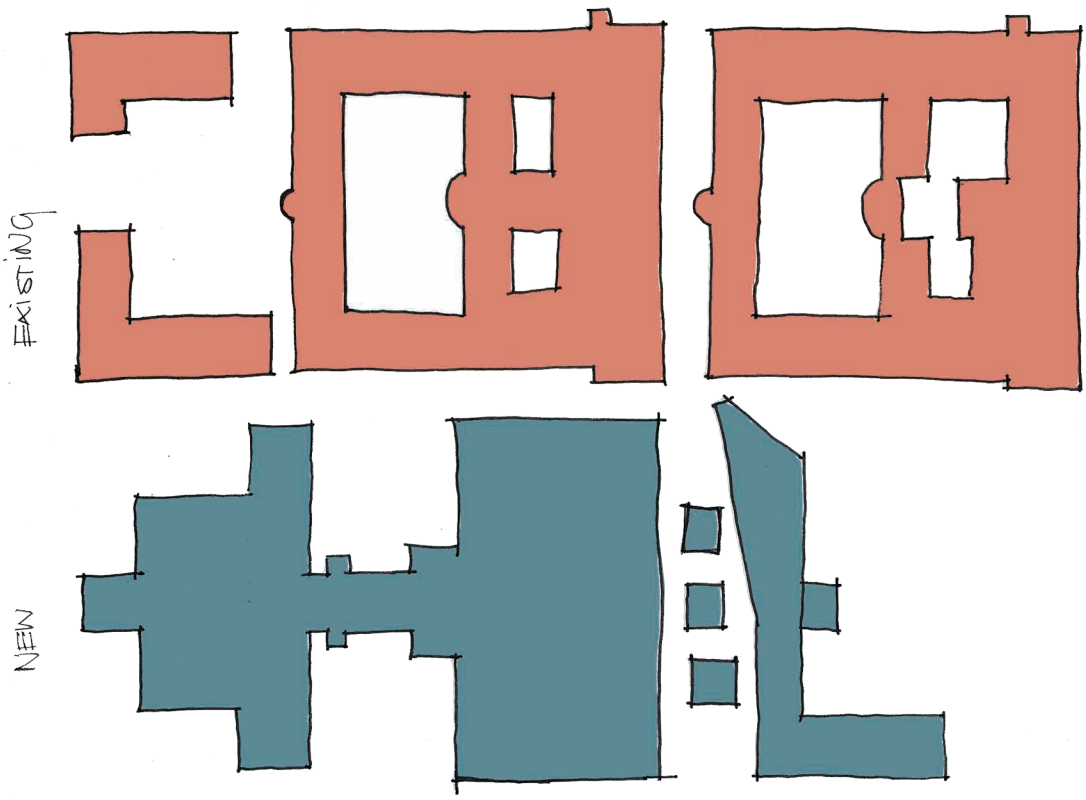



Fig. 2.1.1
*Floor areas of new and exisitng.* Sketch.

# 2.2 Urban heat island reduction

The urban heat island effect is the phenomenon where cities have a higher average temperature than their surrounding areas (McGrath, 2008: 1). The density of built material in cities absorb solar energy and release it through heat and so more artificial cooling is needed inside of buildings.

Two design methods of addressing the urban heat island effect are:

- reduce the amount of asphalt (black absorbs more light and therefore releases more heat) (McGrath, 2008: 2)
- introduce more vegetation (evaporative cooling) (McGrath, 2008: 2)

Both strategies are applied in this scheme.

A large portion of the site is currently covered by asphalt for on-site parking. This produces a lot of heat, especially during summer. This will be reduced by:

-redesigning the onsite parking layout, reclaiming the entire north section to from part of the public garden
- replacing the remaining asphalt with a permeable pave (interlocking concrete blocks with gaps for grass to grow).
- the use of trees in the parking layout will also reduce the heat island effect.

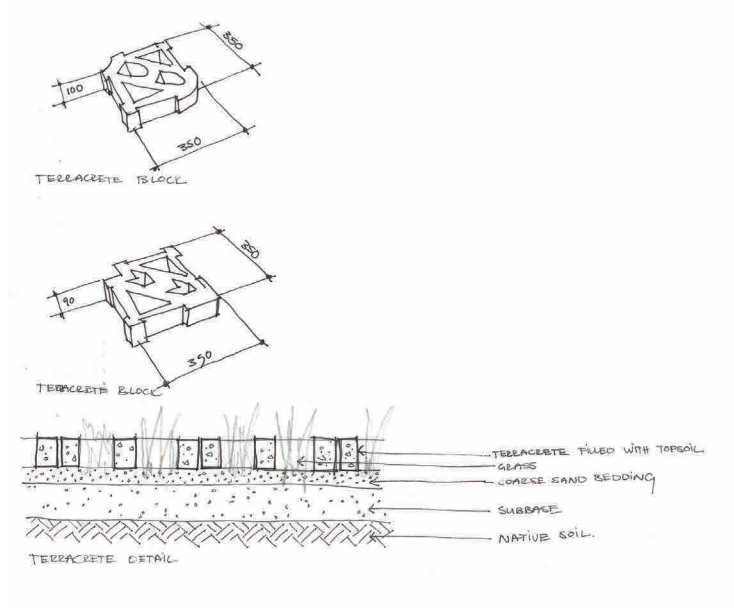



Fig. 2.2.1
*Terracrete paver details.* Sketch.

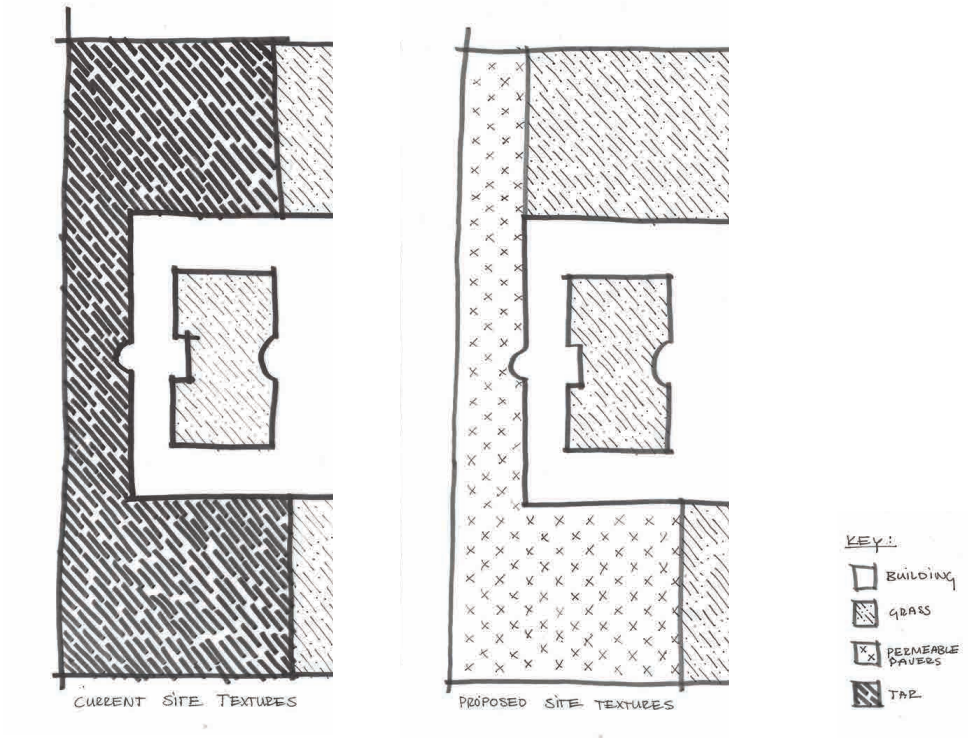



Fig. 2.2.2
*Before and after urban heat island effect reduction.* Sketch.

# 2.3 Water efficient landscaping

A large part of the exisitng site development includes a public garden, which is redesigned using water efficient landscaping. Using the historic English-garden layout as inspiration, the new garden layout is done using Water-Wise landscaping techniques and plants.

The following are examples of Water-Wise landscaping techniques:

- Make the lawn area smaller
- Avoid narrow strips of lawn
- Use permeable hard landscaping surfaces e.g. gravel
- Avoid shaded areas. If unavoidable, use *dwarf agapanthus, mondo grass, hen-and-chicken* and *fairy crassula*.
- Use winter dormant lawn e.g. *Silverton Blue* (*C. dactyton*)
- Choose water wise plants:
    - Small/ needle-like leaves - *ericas, most acacias, rosemary, origanum, thyme*
    - Reduced number of leaves - *karee tree, acacias, buffalo thorn*
    - Grey foliage - *lavender, artemisia, arctotis, giant honey flower* (*Melianthus major*)
    - Hairy leaves - *silver tree* (*Leucadendron argenteum*), *lamb's ear, beach salvia, helichrysym*
    - Succulent leaves - *crassulas, aloes, echevarias, vygies*
    - Closing leaves - *acacias, Jerusalem sage* (*Phlomis fruticose*), *rock rose*
    - Waxy leaves - *euonyms, kalanchoe, Indian hawthorn*
    - Light colour leave underside - *wild olive tree, gazanias, indigenous buddlejas*
    - Sturdy internal structure - *strelitzia, restios, agaves, New Zealand flax*
    - Volatile oils in the stomata - *rosemary, lavender, sage*

(Randwater: Water Wise, unknown: online)

Fig. 2.3.1

Unknown, s.d. Karee tree, a water wise indigenous tree - will replace dying trees in garden. (online - http://www.watercombefarm.co.za/index.php/buy-trees/searsia-lancea-100l-detail)



# 3 Existing Building

## 3.1 Existing structural system

Investigating the nature of the existing heritage building structure is important because the proposed intervention should not cause any damage or collapse of the heritage fabric.

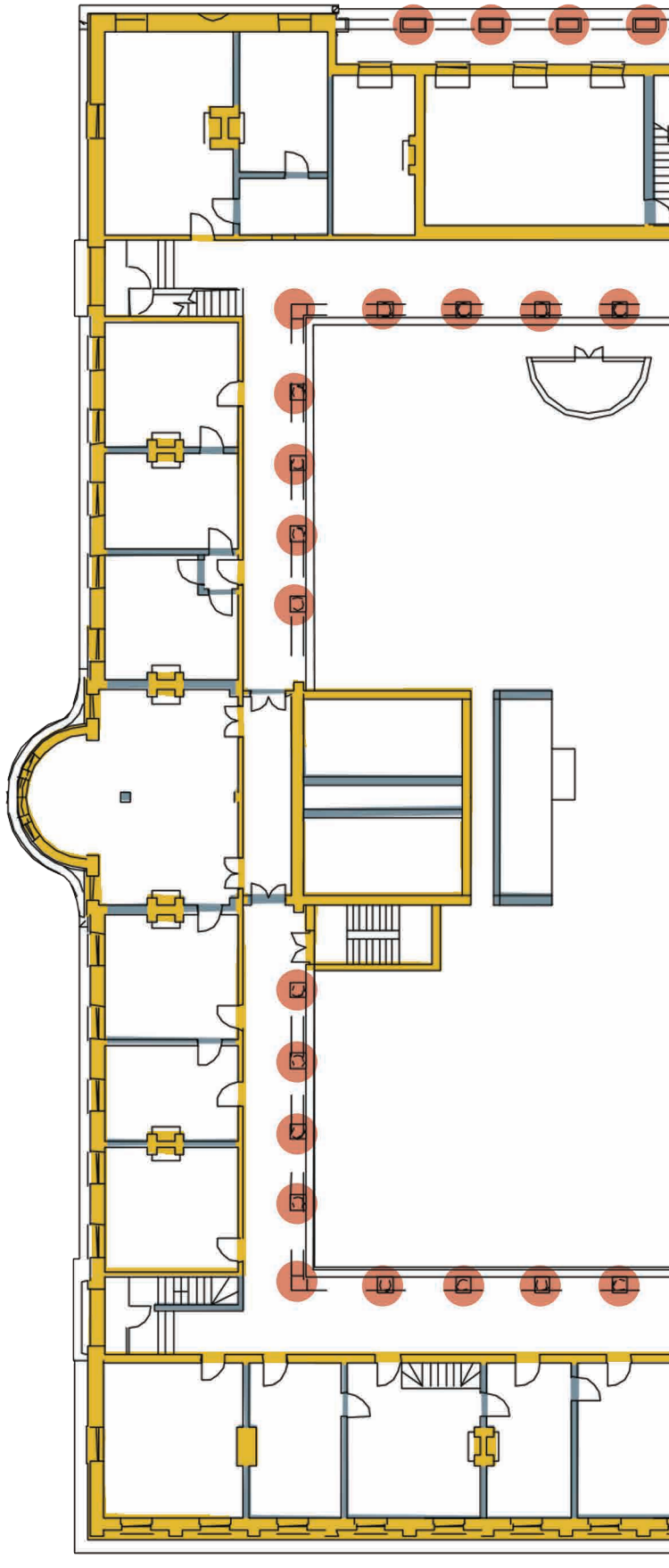
## 3.2 Horizontal and vertical circulation

Evaluating the current circulation systems in the building will help guide the new proposal concerning how to incorporate or alter these systems.

## 3.3 Demolition

A demolition drawing will indicate which interior walls will be removed on each floor level.

# 3.1 Exisitng structural system

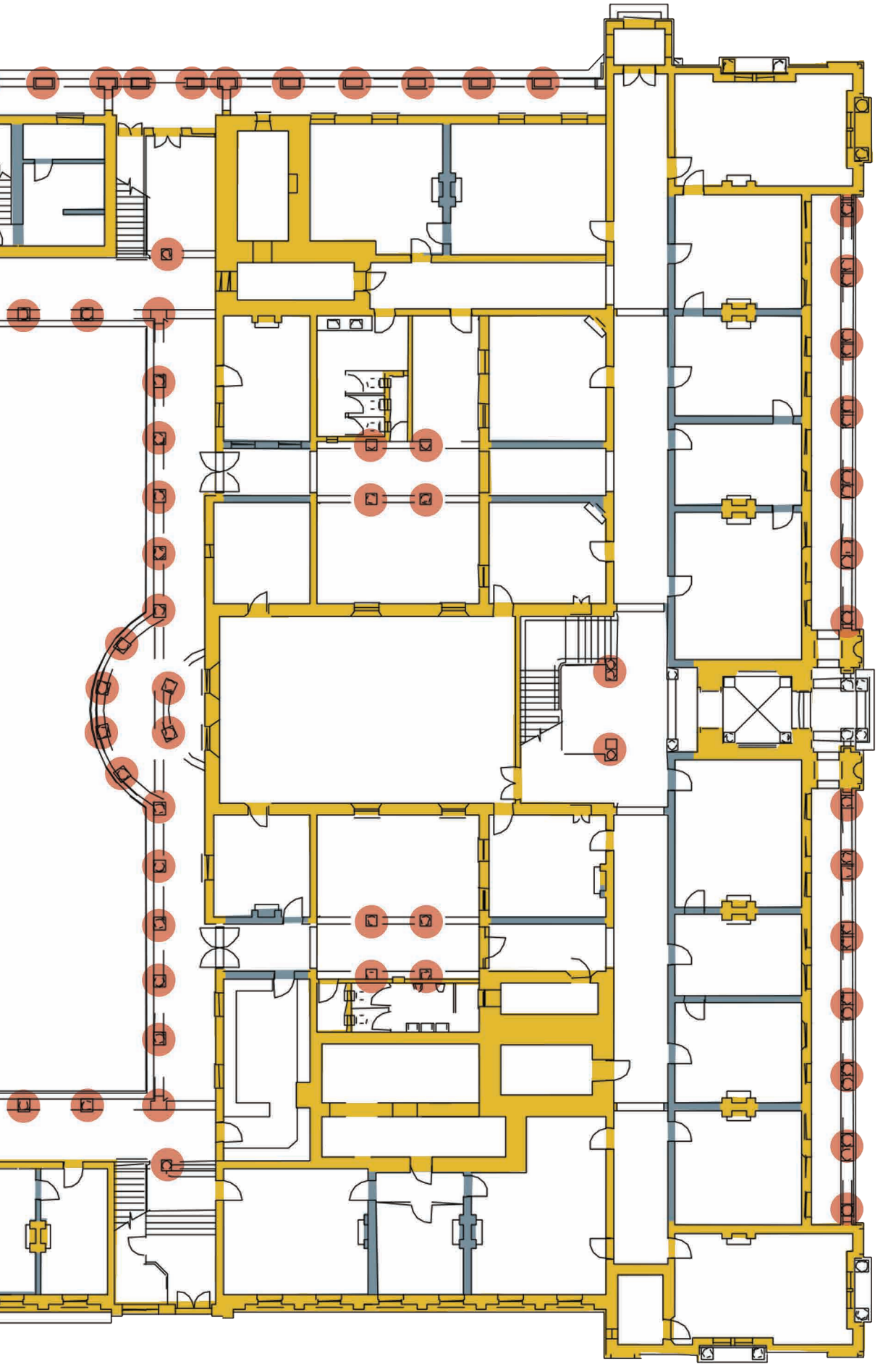


load bearing walls

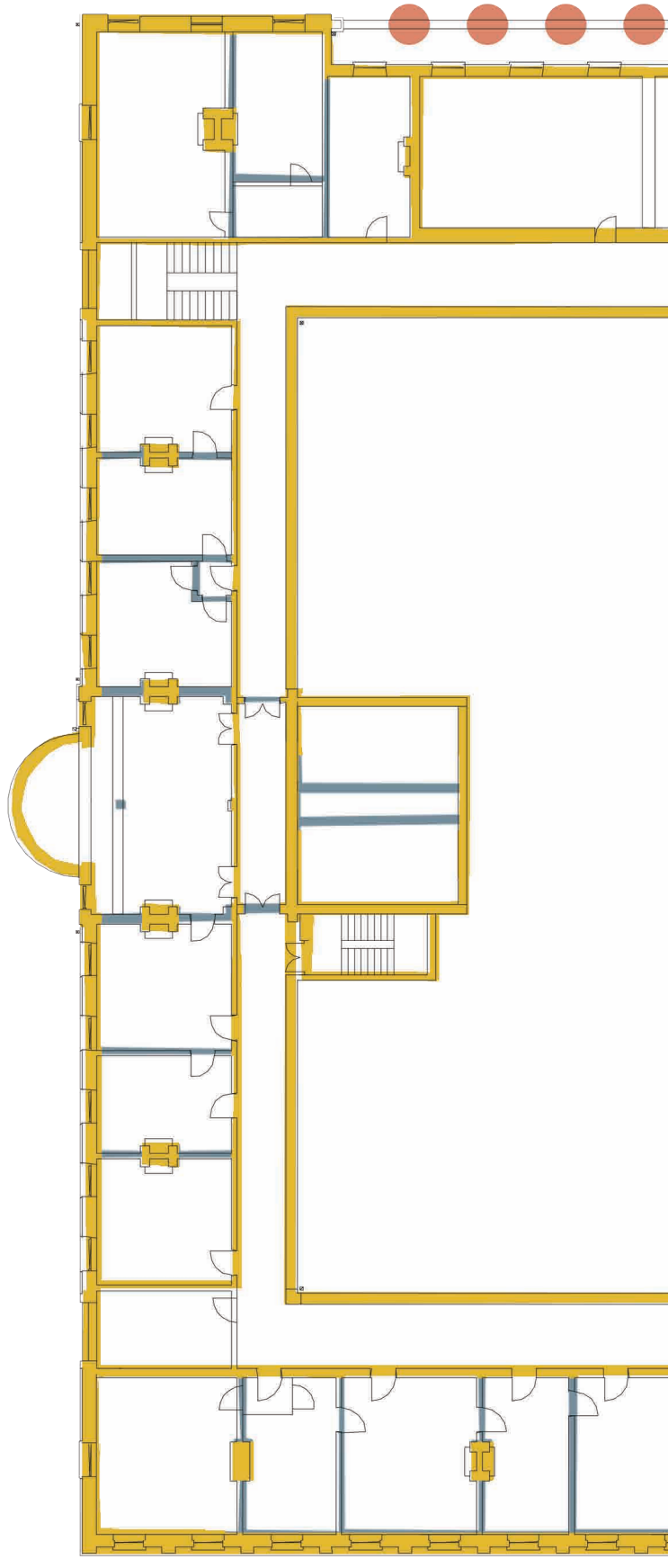
non-load bearing walls

load bearing columns

Ground Floor Plans
(not to scale)



# 3.1 Exisitng structural system

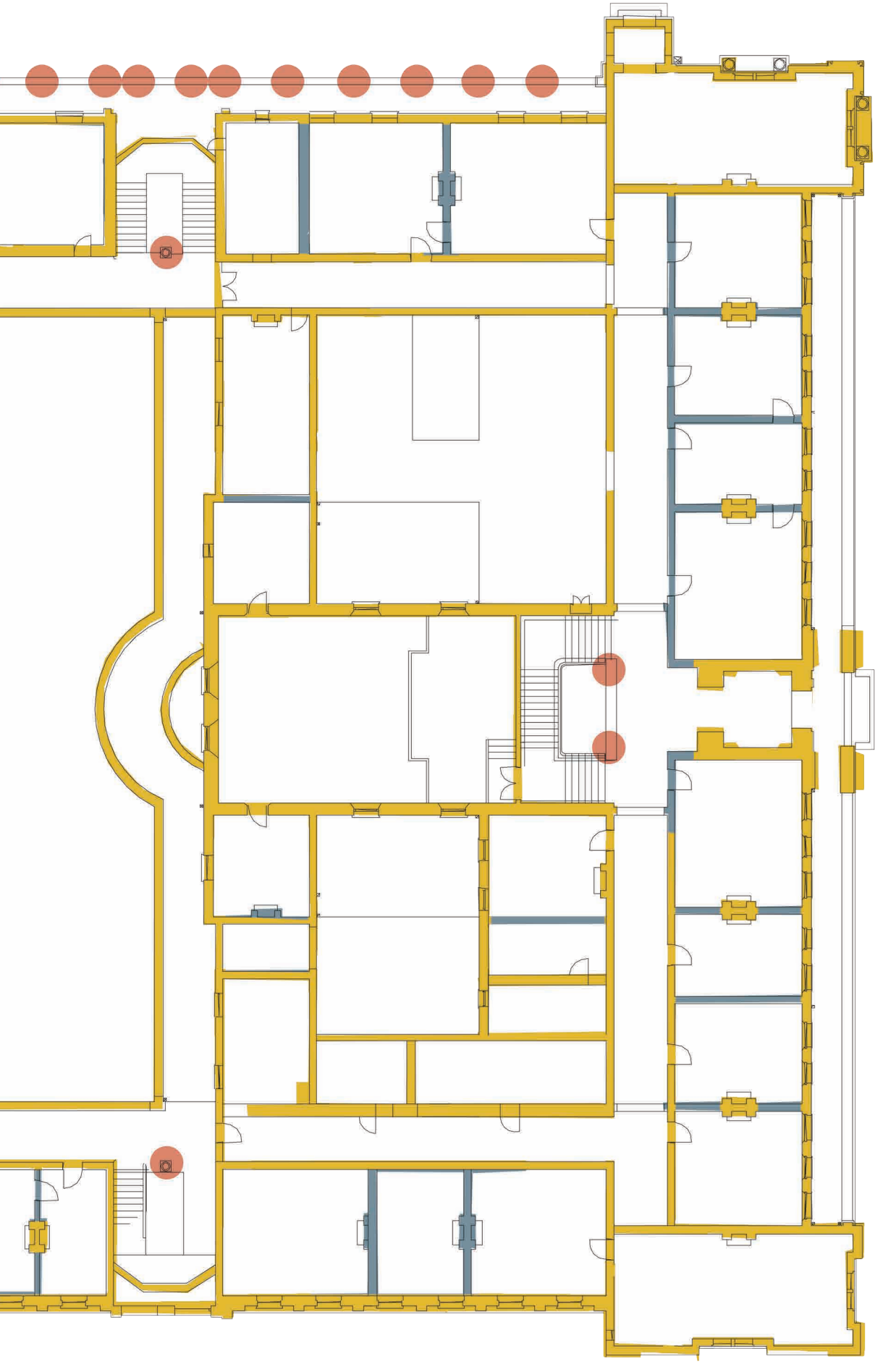


load bearing walls

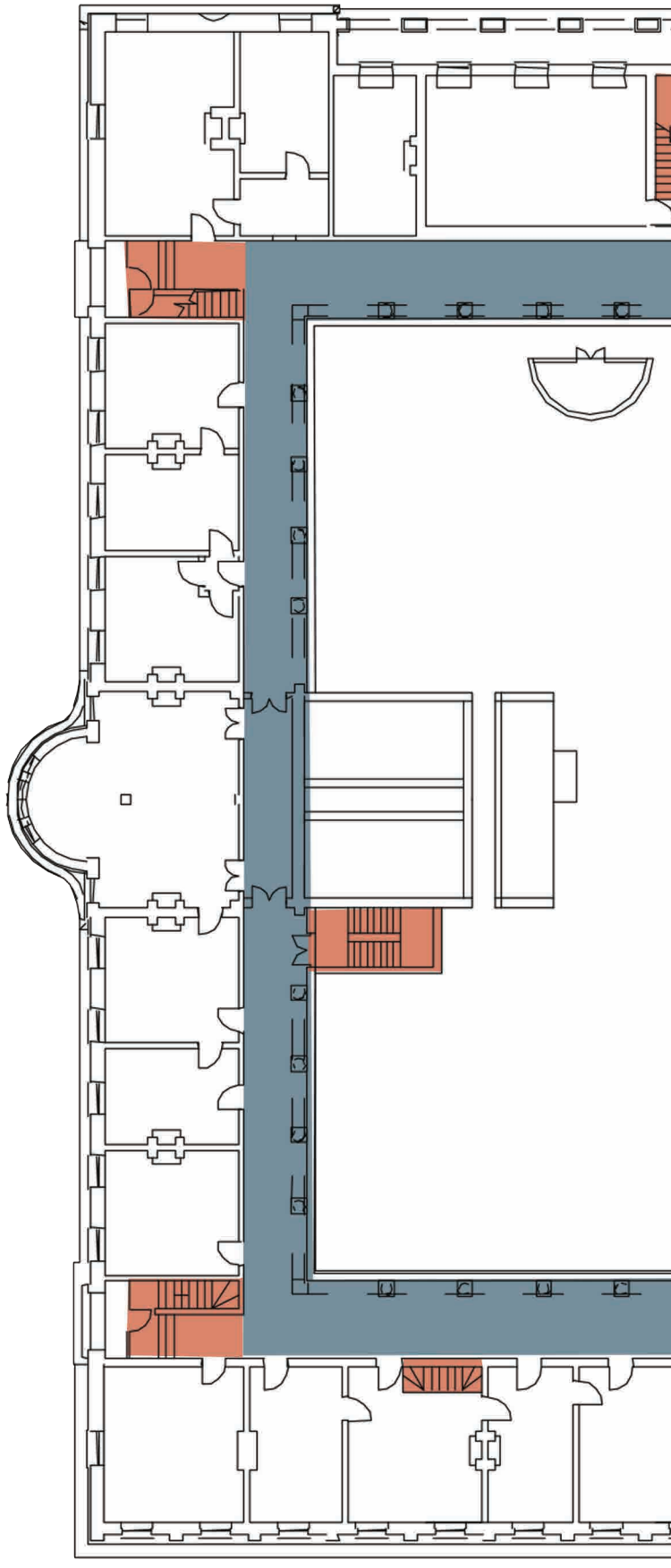
non-load bearing walls

load bearing columns

First Floor Plans
(not to scale)



# 3.2 Horizontal and vertical circulation

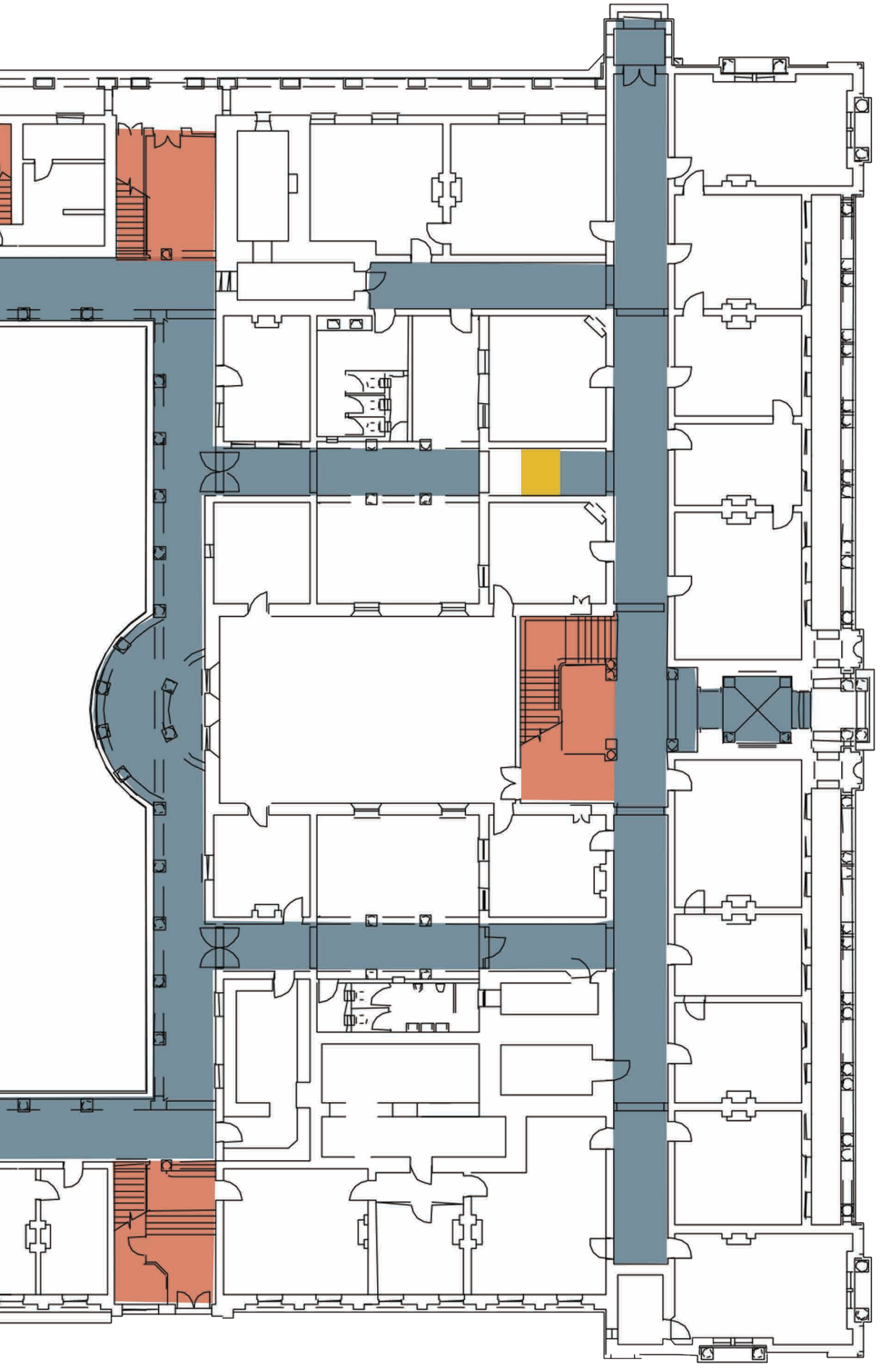


horizontal circulation - lift

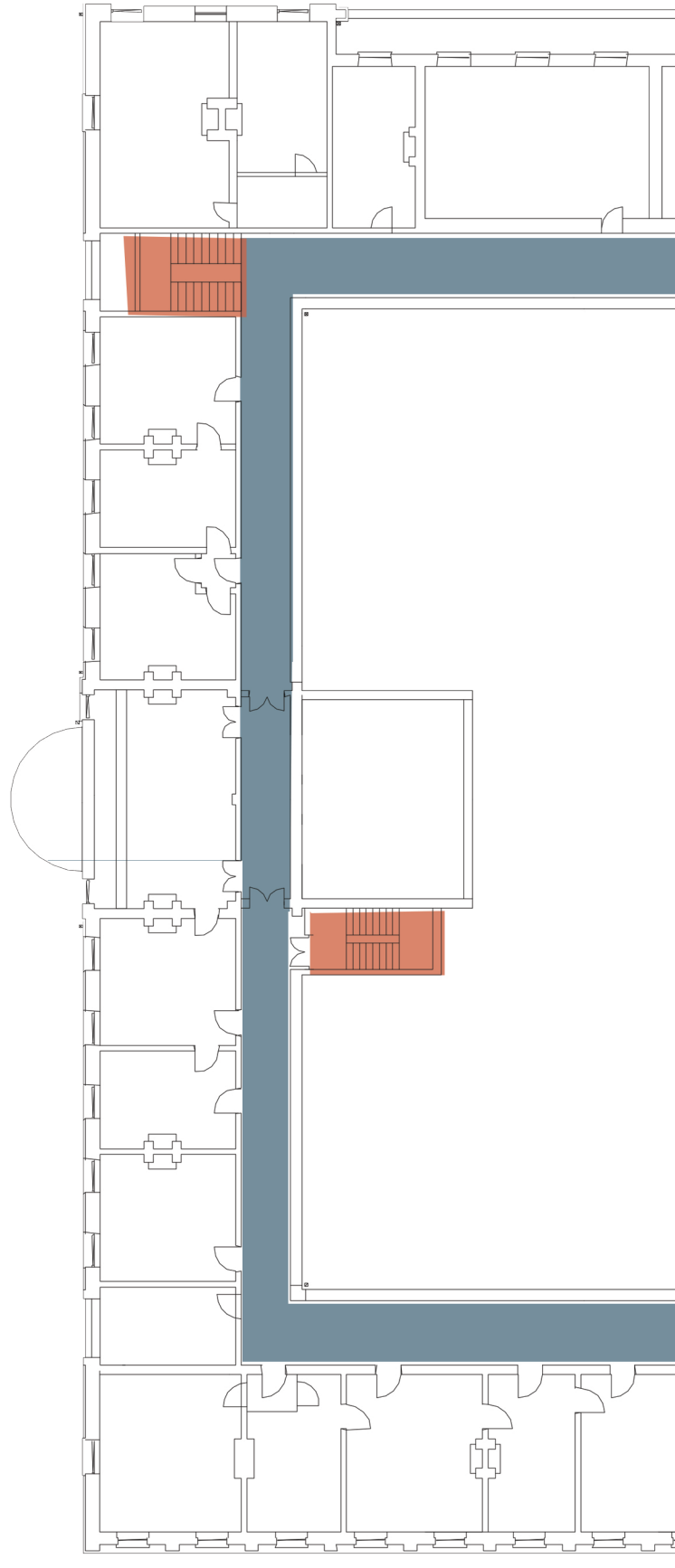
vertical circulation

horizontal circulation - stairs

Ground Floor Plans
(not to scale)



# 3.2 Horizontal and vertical circulation

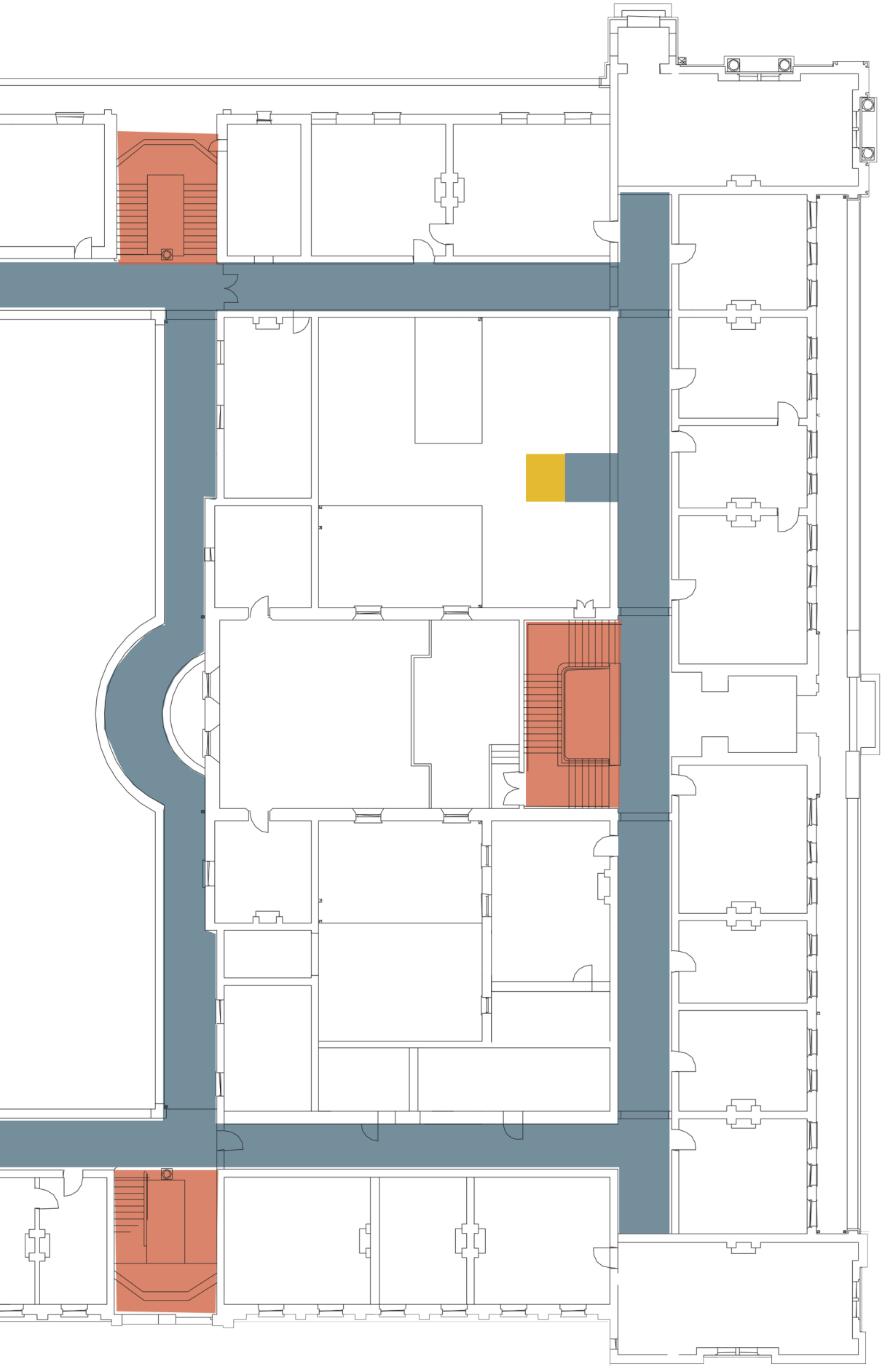


horizontal circulation - lift

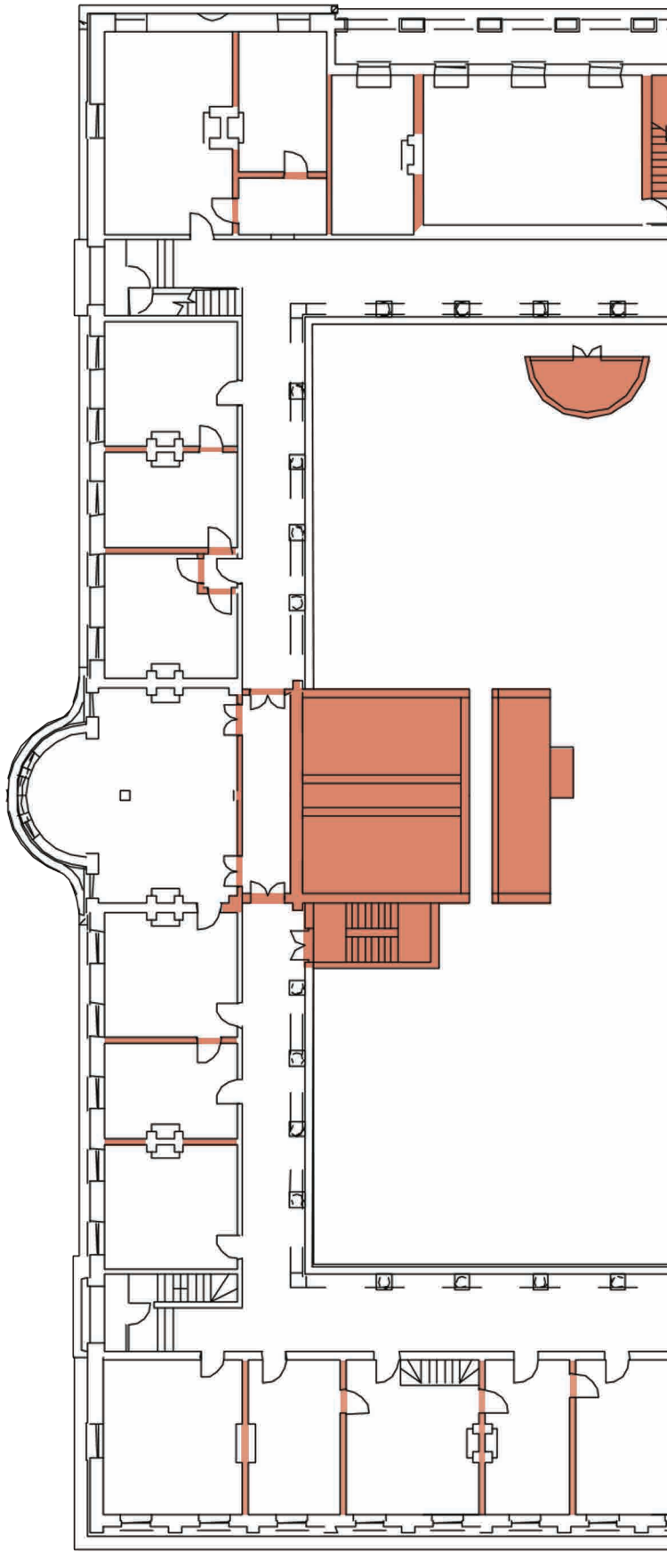
vertical circulation

horizontal circulation - stairs

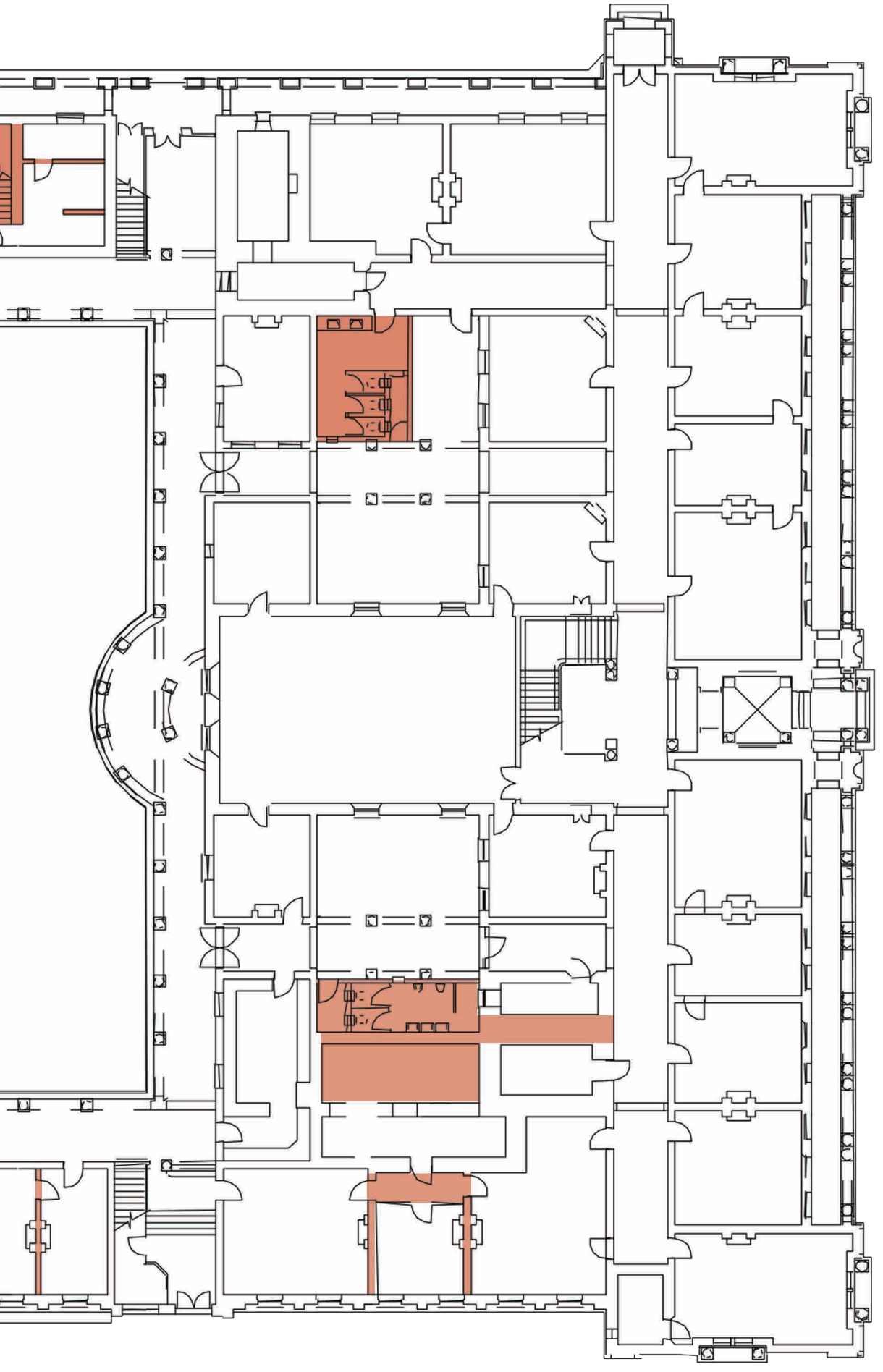
First Floor Plans
(not to scale)



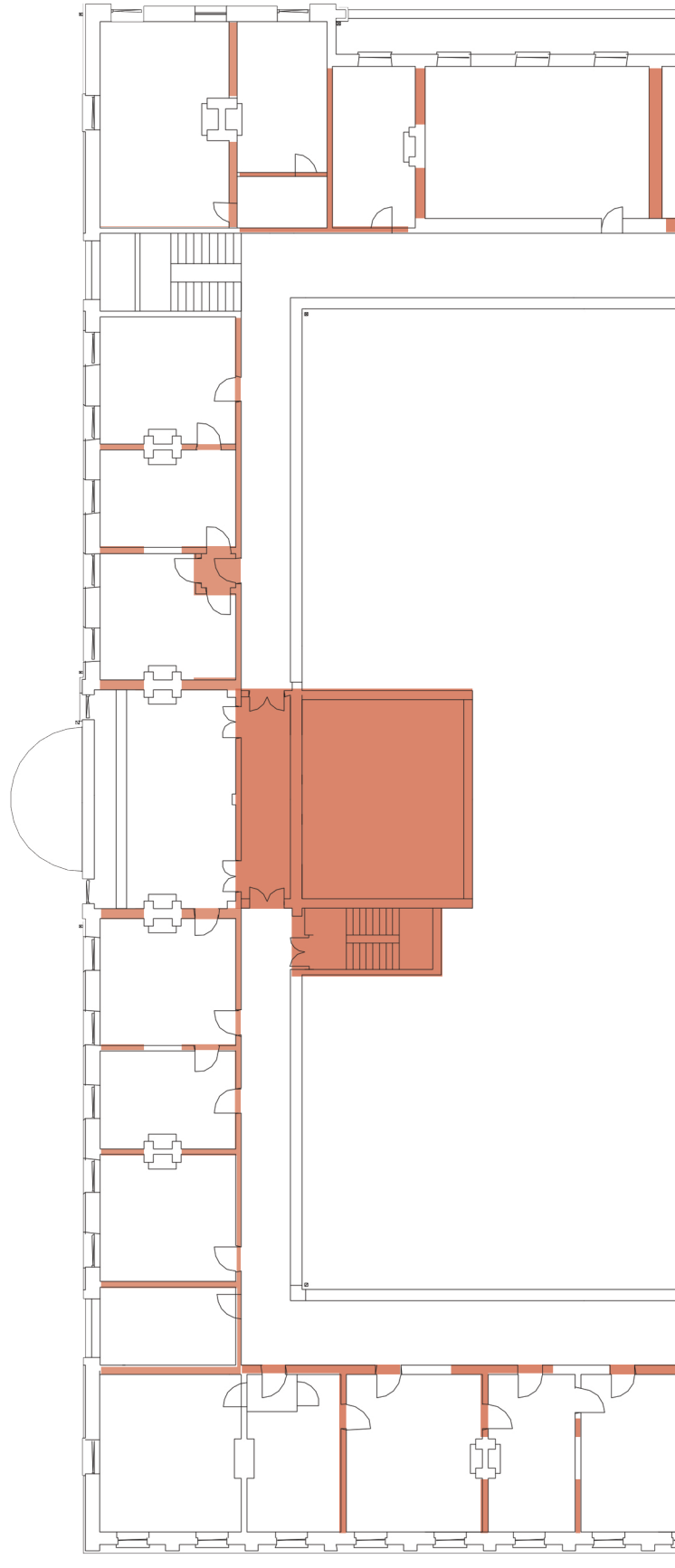
# 3.3 Demolition



Ground Floor Plans
(not to scale)



# 3.3 Demolition



First Floor Plans
(not to scale)



# 4 Function specific requirements

## 4.1 Archive

Climate controlled storage and exhibitions facilities:

As an archive and exhibition of very fragile objects, in particular the written documents/manuscripts, the archival and exhibition spaces require specific conditions. Provision is therefore be made for a mechanical systems service room.

Archives are very precise systems and are therefore investigated to ensure the design adheres to the relevant standards. Ideal conditions for archives are:
- Temperature: 13°C to 20° (Henderson, 2013: 7).
- Relative humidity: 25% to 60% (Henderson, 2013: 7).
- Ventilation: air circulation required behind and around stacks and shelves - air gap of at least 150mm between collections and the building fabric, and 50mm between collections and the shelf above (Henderson, 2013: 9).
- Monitoring equipment (Henderson, 2013: 10-11).
- Light: low lighting - 50 lux maximum (ICON, 2006: 2).

Different storage furniture for different artefacts:

Books, journals, press clippings, books manuscripts, theatre manuscripts

- mobile shelving units
(see Fig. 4.1.1)



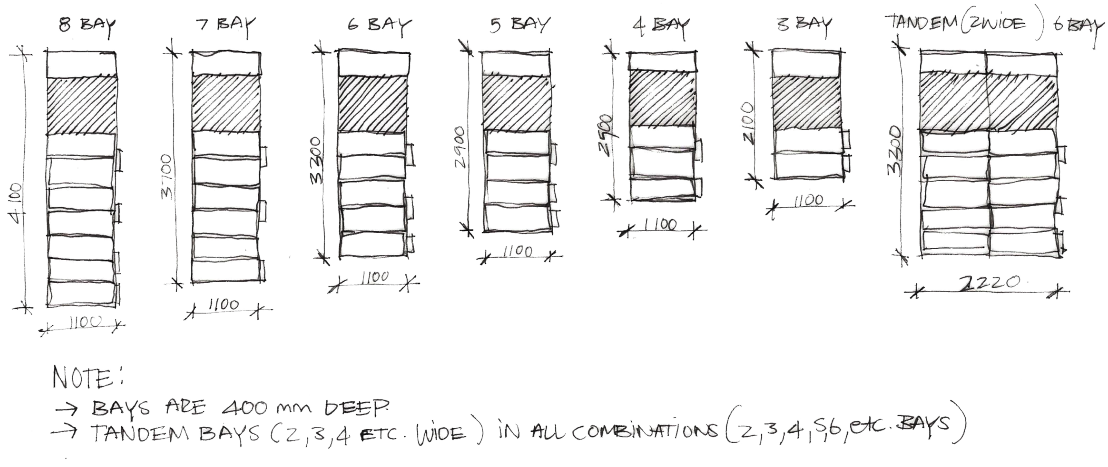



Fig.4.1.1
*Compact mobile shelving.* Skecth

Different storage furniture for different artefacts:

Artwork
- purpose designed vertical and sliding racking (see Fig. 4.1.2)

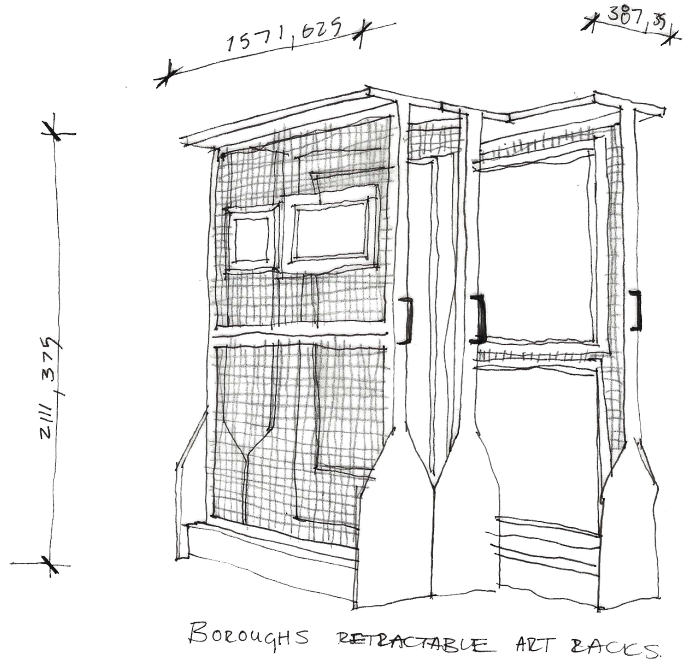



Fig.4.1.2
*Sliding artwork rack.* Skecth

Different storage furniture for different artefacts:

Costumes
- flat drawer cabinet or clothes rails with padded hangers and covering sheet (see Fig. 4.1.3)

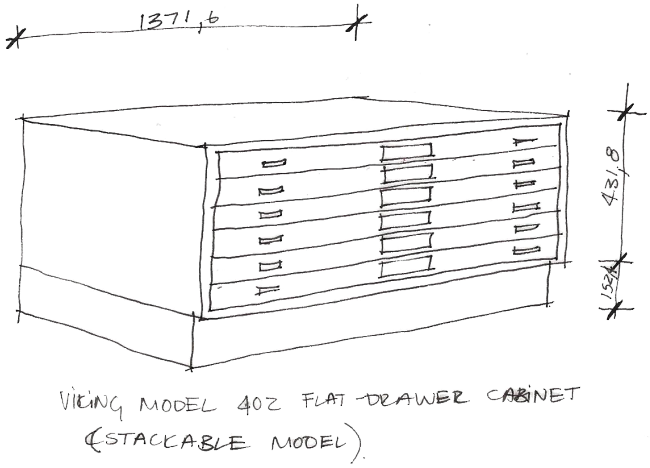



Fig.4.1.3
*Flat drawer cabinet - stackable.* Skecth

Different storage furniture for different artefacts:

3D objects
- static deep shelving

Posters and programs
- static shelving

Audio visuals
- static shelving

(see Fig. 4.1.4

Furniture
- Wide span static shelving

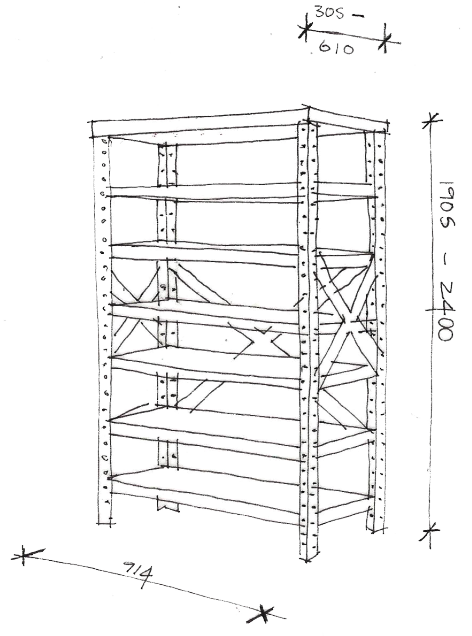



Fig.4.1.4
*Static shelving.* Skecth

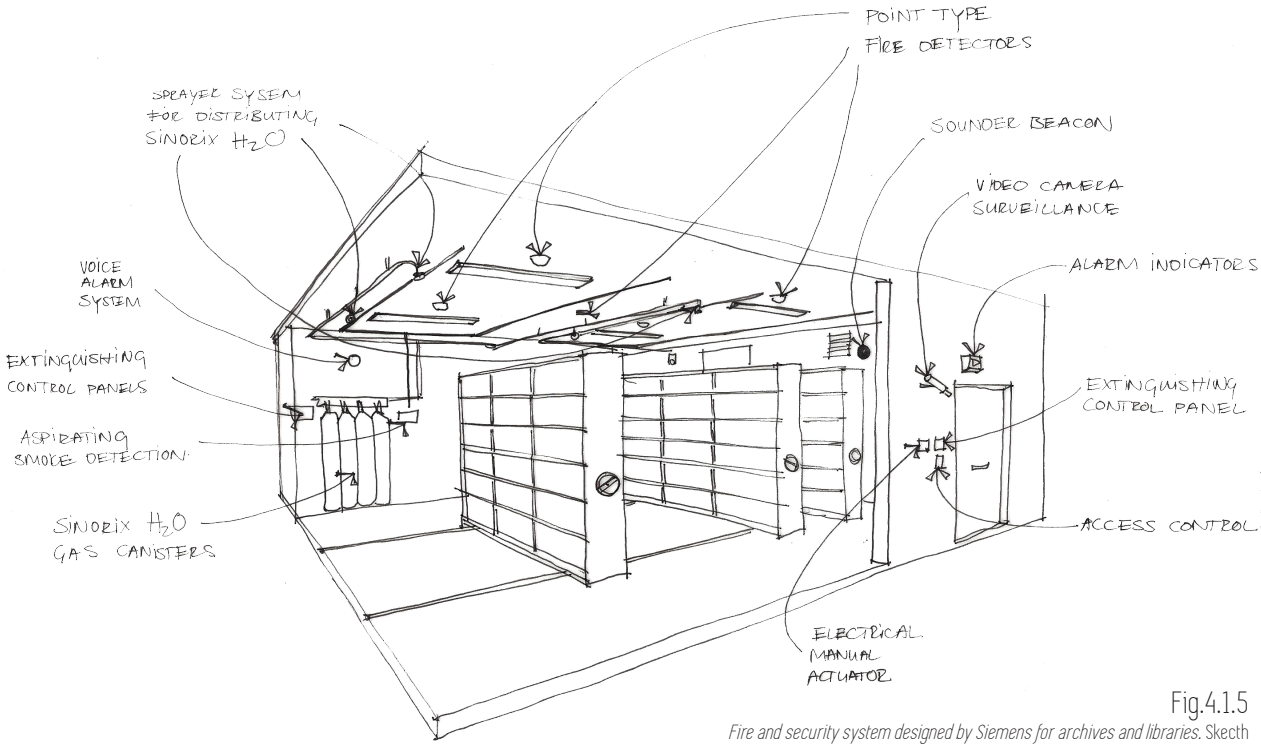



Fig.4.1.5

*Fire and security system designed by Siemens for archives and libraries.* Skecth

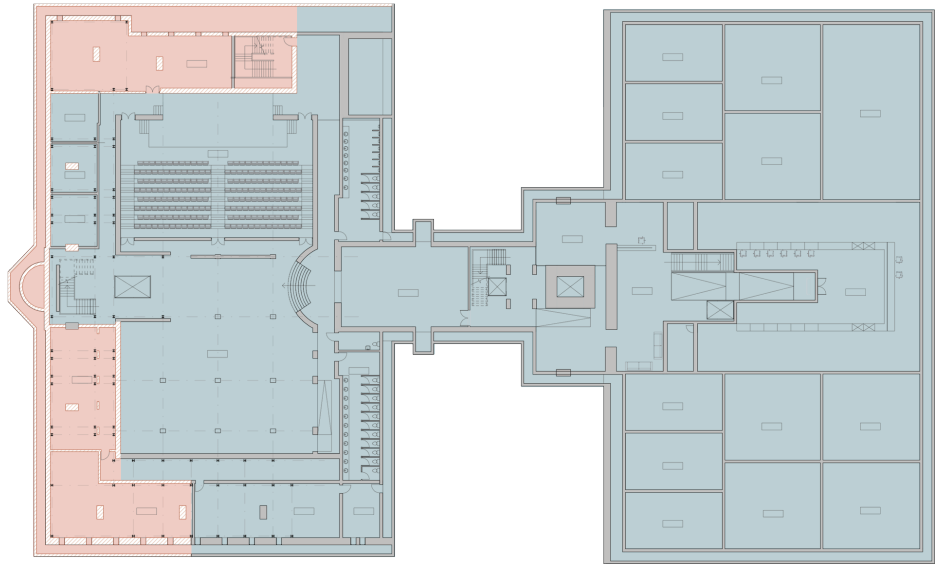
# 5 New structural systems

## 5.1 Sub-structure

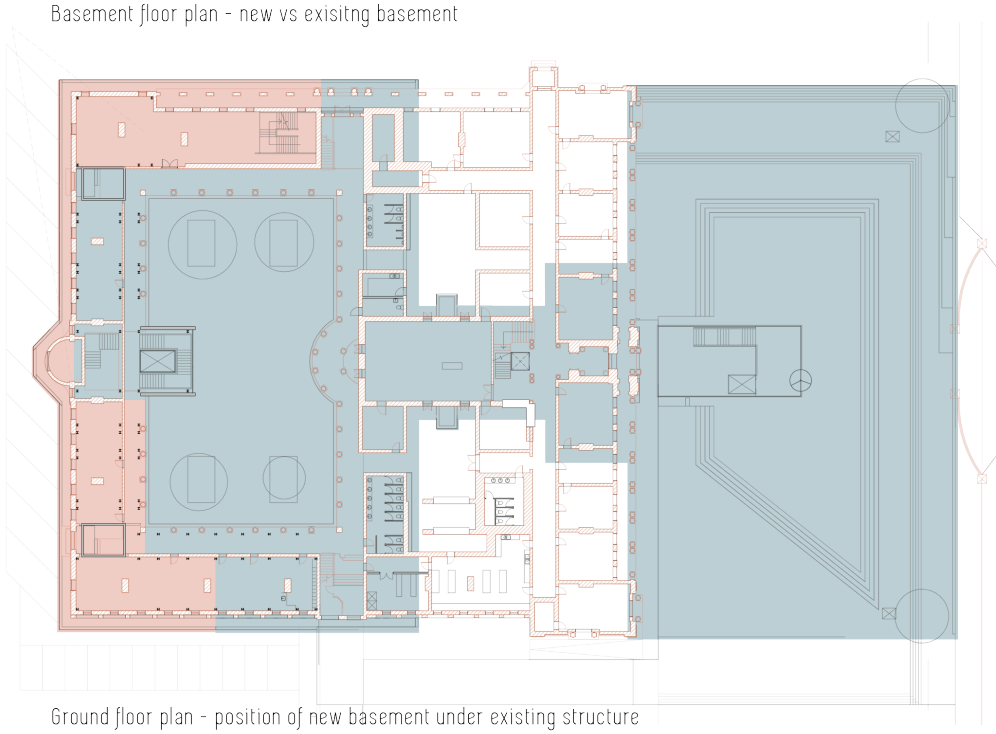
This involves a basement underpinning process to build the new basements under the existing structure, a 1m drained cavity basement system and a waffle slab foundation to distribute the weight of the archives.

### Basement underpinning process:

The proposed design introduces a new underground structure. Parts of this is placed under the existing structure (see fig. 5.1.1). A basement underpinning process is used to place the new basement structure (see fig. 5.1.2). Basement underpinning is when temporary or permanent support is installed to an existing foundation to gain increased depth or strength (Nemati, 2018: 1).



Basement floor plan - new vs exisitng basement




Ground floor plan - position of new basement under existing structure

Fig. 5.1.1
*Diagrams showing new and old basement sub-structures.*
Diagram.

# Example of basement underpinning process:

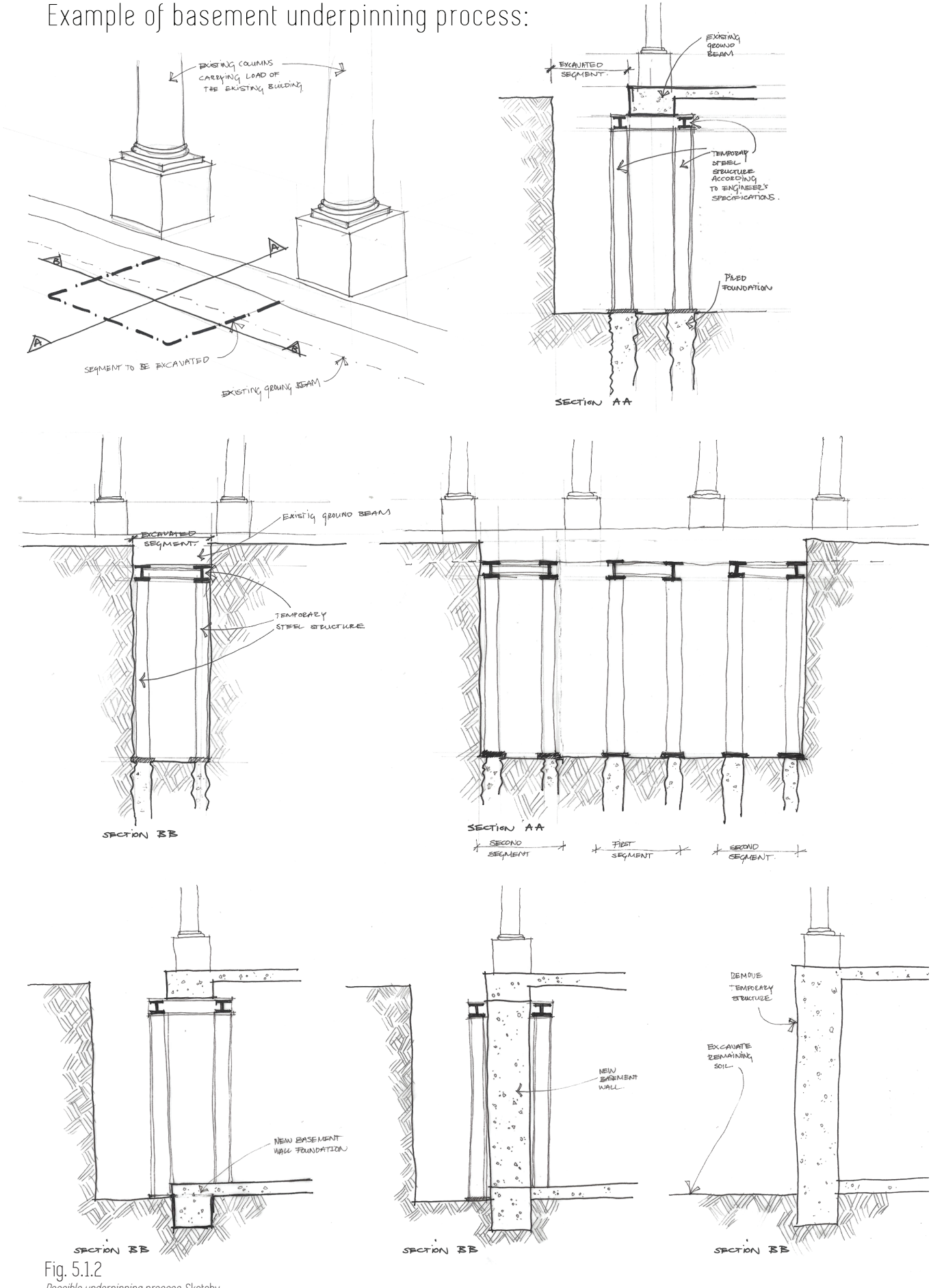



Fig. 5.1.2
*Possible underpinning process.* Sketchv

After a consultation with Carl von Geyso (Pr.Eng.) and theoretical research (Ching, 2014: 3.06)
the follwoing underpinning process is proposed:

### (Courtyard underpinning:

The first step is to support the foundation beam under the colonnade. This will happen in small segments. The soil will be excavated to the new depth of the basement. Then, a temporary steel structure is placed under the exposed ground beam. This process of excavation is repeated one segment at a time until the existing ground beam has been evenly supported. After this. All the soil around in the courtyard can be removed and the new reinforced concrete basement wall can be cast. Lastly the temporary steel supports can be removed. Or if it was placed directly under the ground beam, the wall could be cast around it.

Except for under the existing tower, this process is similar everywhere else.

### Tower underpinning:

The process of underpinning the tower differs from that of the courtyard in that the whole tower is underpinned at once, instead of in segments. This is to prevent the tower from collapsing to one side (Von Geyso: 2018). After the beams have been placed under the existing foundations they can be supported by piles.

### Raft foundation:

To evenly distribute the weight of both the new and existing structures, a raft foundation is used. Ching defines a raft foundtion as "a thick, heavily reinforced concrete slab that serves as a single monolithic footing for a number of columns or an entire building." (2014: 3.09). This slab will be stiffened using a grid of ground beams. The dimensions of this structure is deterined by an engineer, so that it can support the loads of the structure above, as well as the hydrostatic pressure from the water-logged site below.

### Basement Walls:

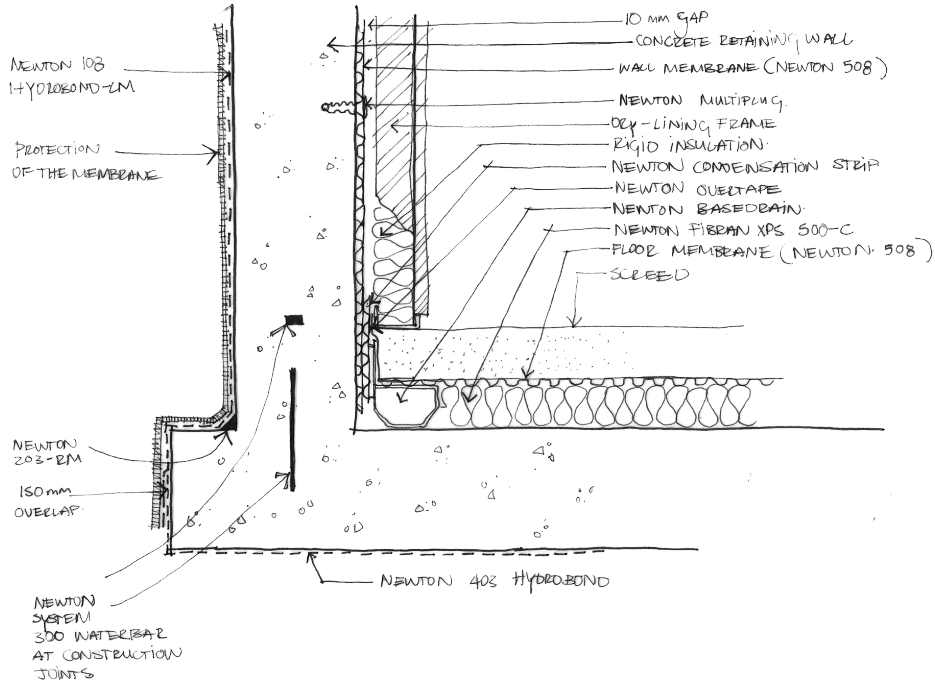
The site is water-logged and therefore careful attention is given to waterproofing of the basement wall. Following the example of Roodt's 2010 intervention, a 1 metre wide type C drained cavity basement system will be used. This basement system makes provision for the removal of any water that penetrates the external wall, with an internal drainage system (Premium Guarantee, s.d: 10). The 1m cavity between all the basement walls provides access for maintenance, as well as isolating the interior exhibitions and archive storage form any water penetration and damage during maintenance. Using Renzo Piano's design of the Morgan Library's new underground archive as a precedent study, a cavity space is also provided under the floor of the archive (see Figure 5.1.4). Again, this provides maintenance access and isolation of the interior. This cavity is kept low enough to ensure that it is not used for any other purposes.

Concerning the external wall of the basement, JN Newton Waterproofing provides an extensive range of basement waterproofing systems, with all the necessary products.



Fig. 5.1.4
Renzo Piano Foundation. s.d. N*ew archive structure of the Morgan Library with open level under archive floor.* Photograph. (Renzo Piano Foundation - http://rpf.ice.spill.net/project/88/morgan-library-renovation-and-expansion/images/page/1/).

Fig. 5.1.5
*Waterproofing of the outer basement wall according to Newton Waterproofing specifications.* Sketch



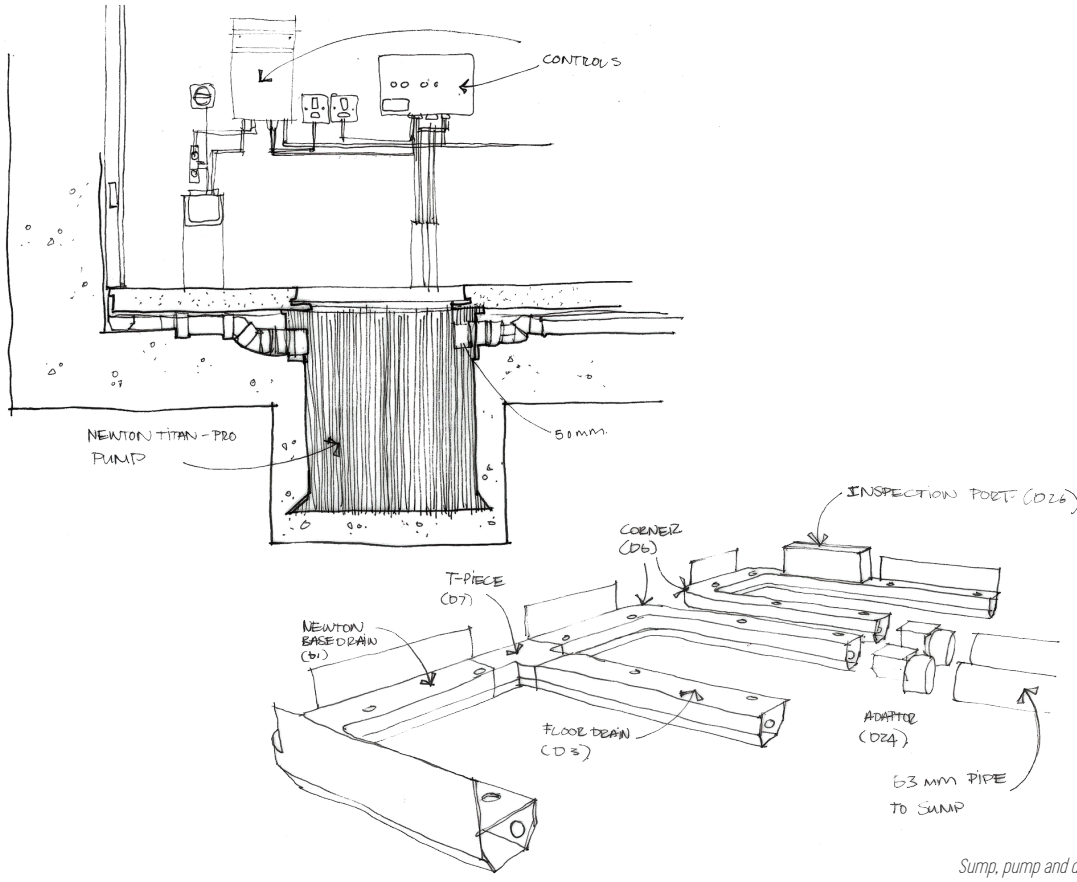




Fig. 5.1.6
*Sump, pump and drainage system.* Sketch

# 5.2 Super-structure

## Steel frame carrying new wing:

The new design proposal consists of a three-storey, rigid steel frame structure placed within the existing building. (see Fig. 5.2.1).
The columns for this structure puncture the first floor and ground floor slab, extending to the foundation of the basement. In the western wing, there are two new steel columns on either side of the existing columns and beams. In the southern wing the new steel columns are placed in between the existing columns. This is to prevent columns from being placed in front of the existing windows.
Using the formula in the *Architective* Handbook (Schmidt, 2013: 316) (see Fig. 5.2.2) the depth of the beams are calculated. The largest span between columns is 9 metres, therefore 245 x 245 mm H-section are used as beams and 305 x 305 mm H-sections for the columns.

The first model of this structure has a very dense grid (see Fig. 5.2.3). This has since been refined to have less members.

## New wing:

The new wing consists of a light steel frame truss structure. These trusses are 800mm deep so that the cantilevering point at the north end can carry its own weight. These trusses run in two directions and are spaced close together for strength and stability. The purlins to which the internal and external cladding is attached, is placed within this structure so that it takes up less space. The depth of the structure allows for services to by placed inside of the floors, walls and roof.

In Figure 5.2.4, the second structural model explores this structure. In this model the frames are placed according to the structure below. After evaluation, the amount of girders are increased and evenly spaced from each other since the structure will not be visible.

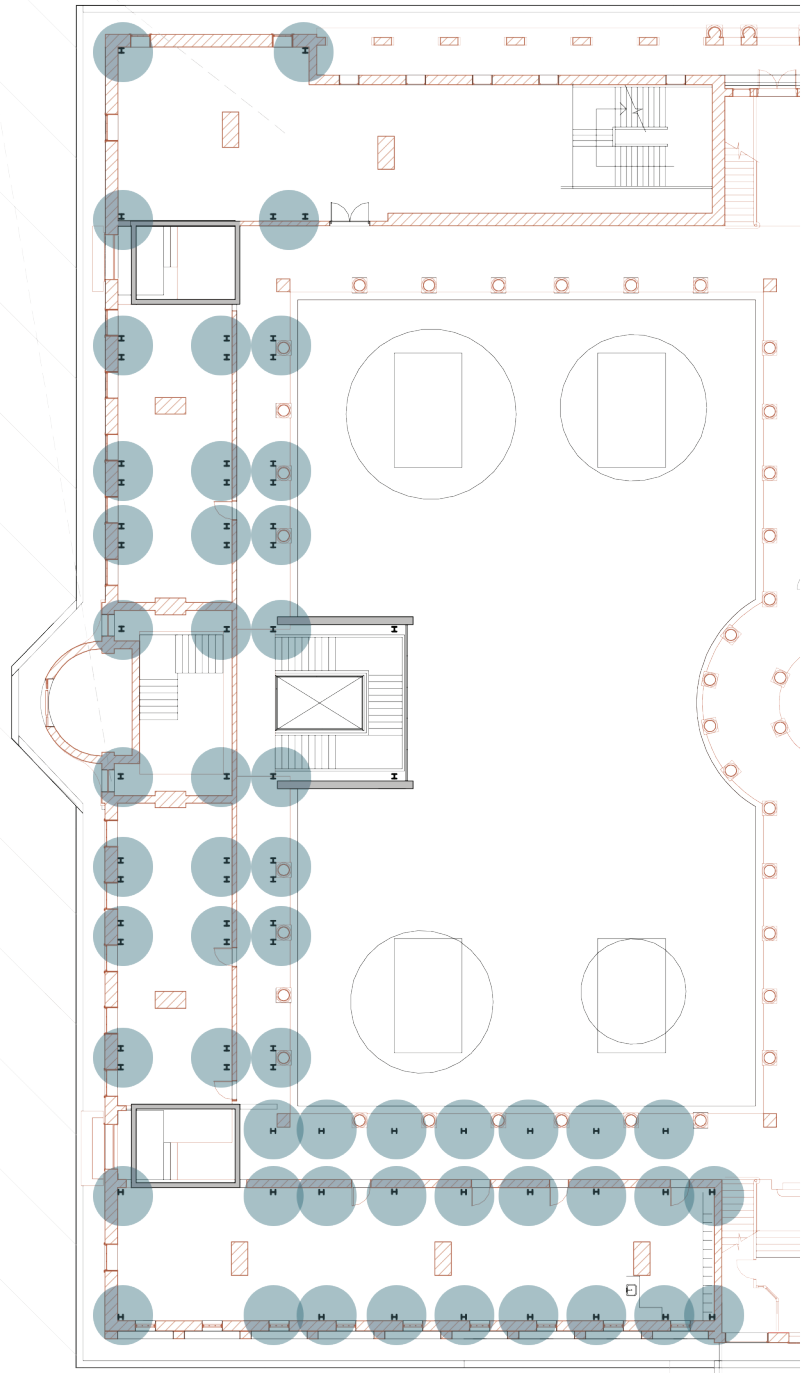


Fig. 5.2.1
*Position of new columns within the existing structure.* Sketch.

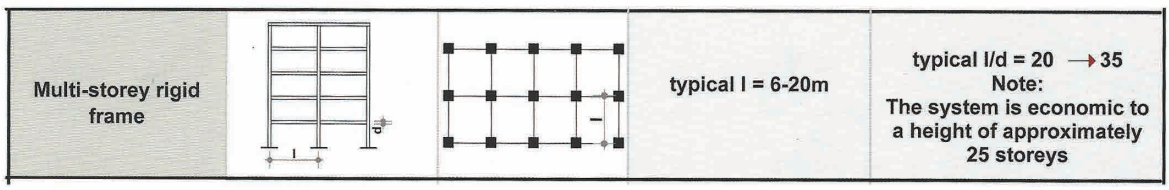



Fig. 5.2.2
Schmidt, S. 2013. *Multi-storey rigid frame.* Diagram (Schmidt, S. 2013. Architective. Johannesburg: Architective Publications, p.316).

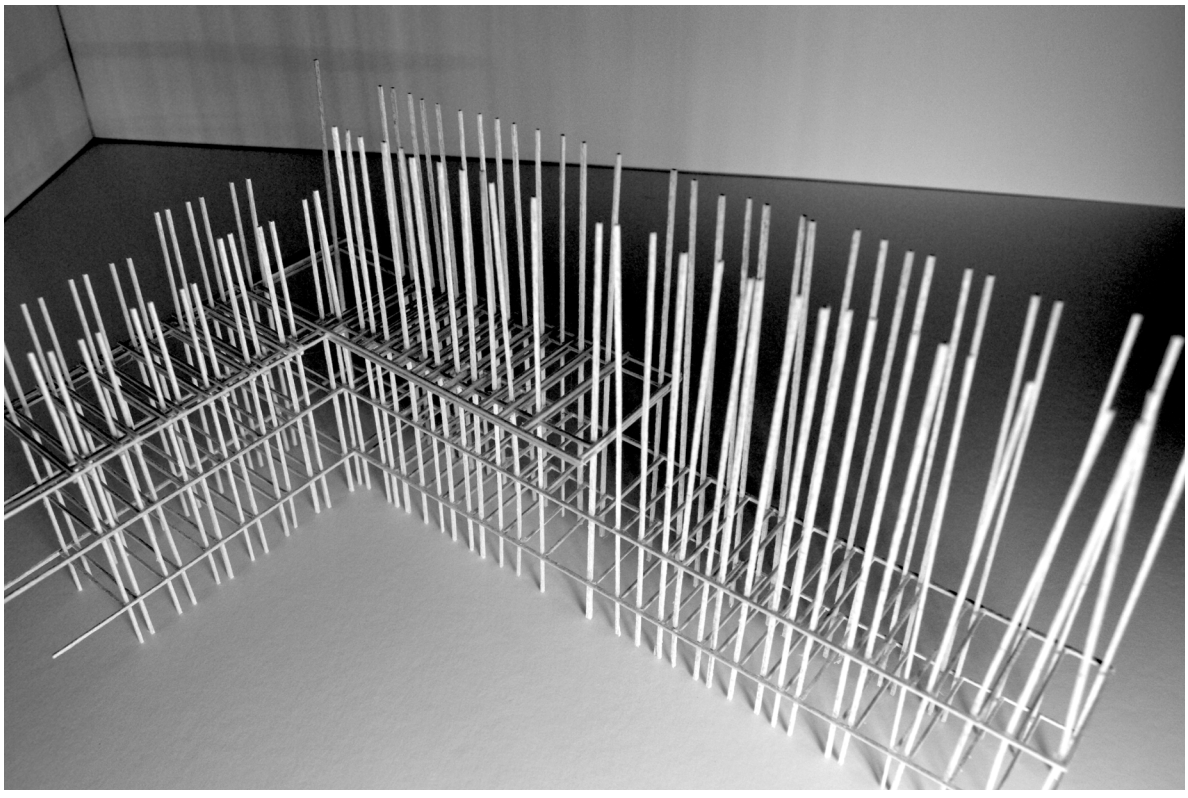


Fig. 5.2.3
*First structural model.* Photograph

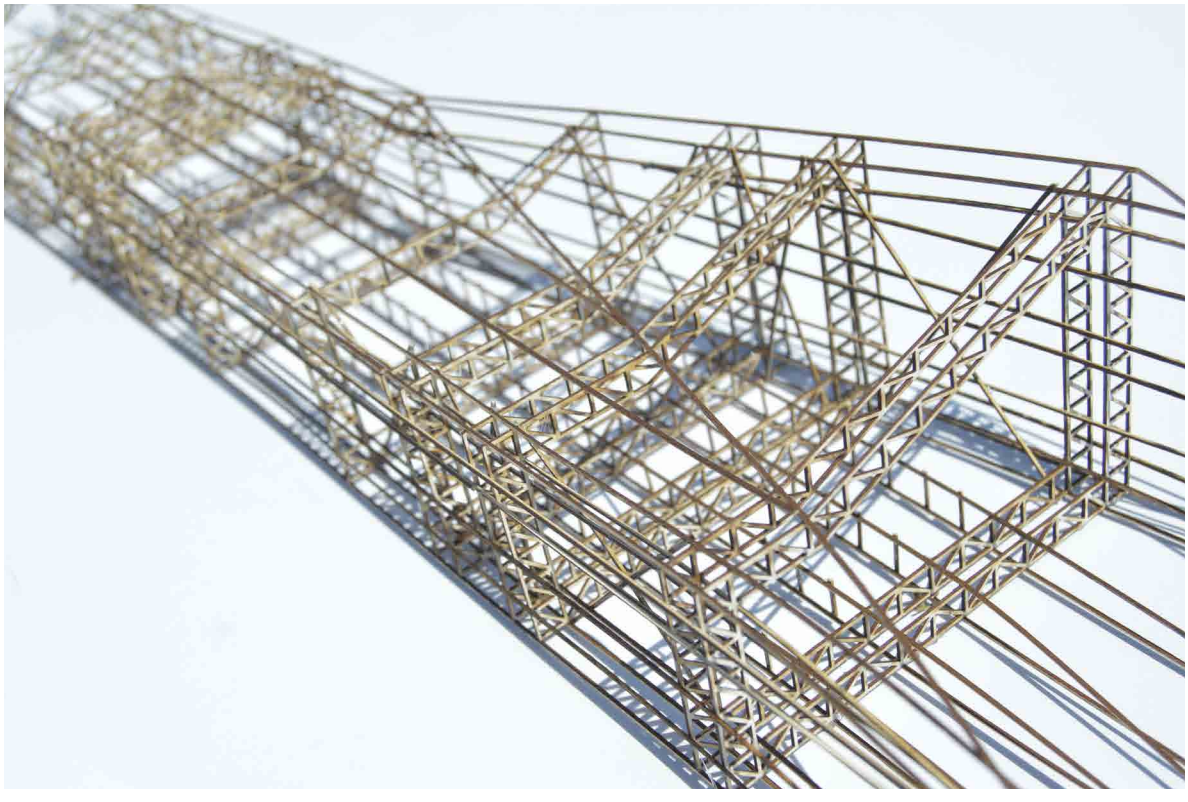


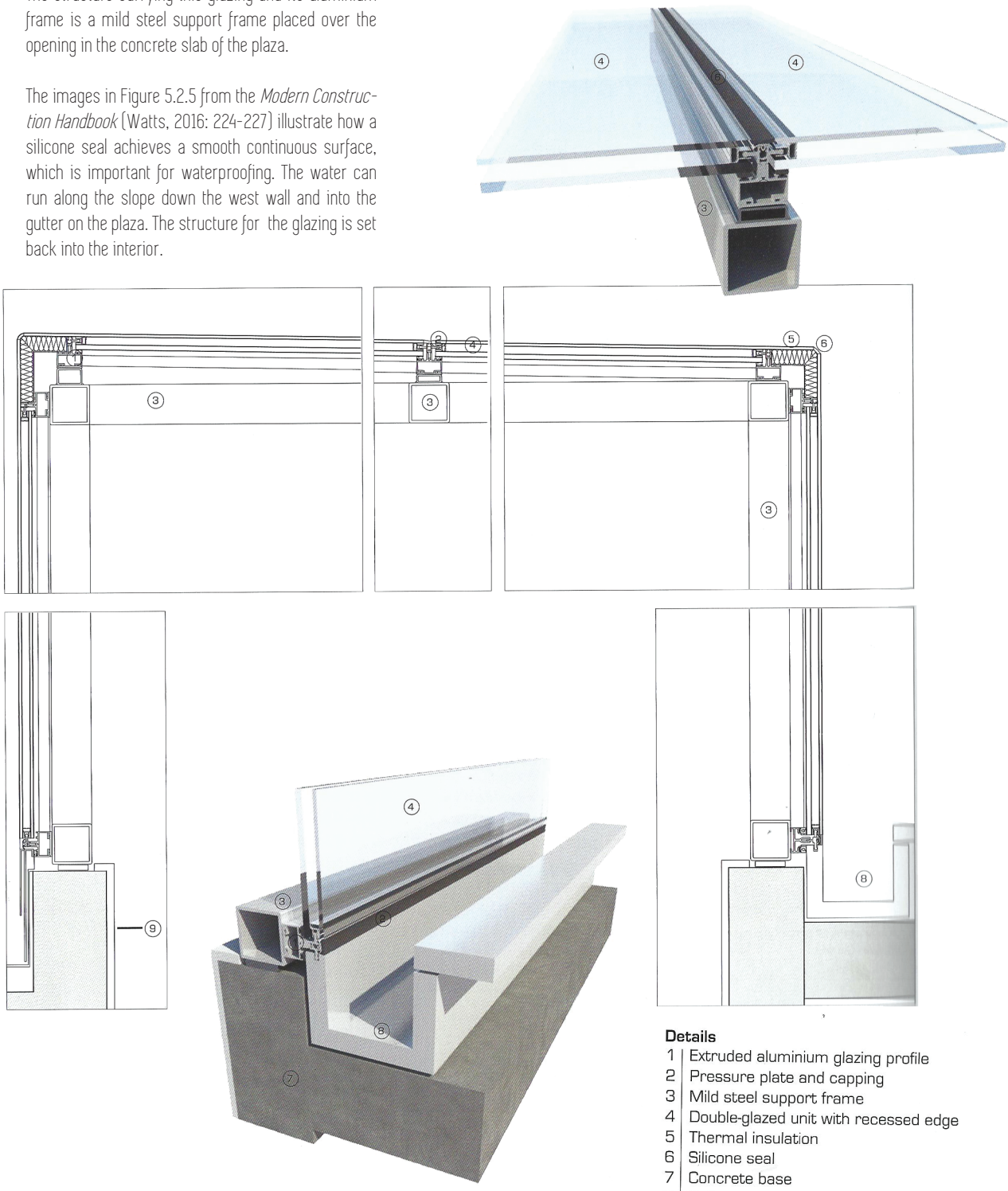
Fig. 5.2.4
*Second structural model.* Photograph.

New entrance:

The new entrance on the east side of the existing tower, is essentially a glass box. To achieve this, the details shown in Figure 5.2.5 is implemented. This detail allow for both the roof and walls to consist of glazing. The structure carrying this glazing and its aluminium frame is a mild steel support frame placed over the opening in the concrete slab of the plaza.

The images in Figure 5.2.5 from the *Modern Construction Handbook* (Watts, 2016: 224-227) illustrate how a silicone seal achieves a smooth continuous surface, which is important for waterproofing. The water can run along the slope down the west wall and into the gutter on the plaza. The structure for the glazing is set back into the interior.

Fig. 5.2.5
Watts, A. 2016. *Section and 3D details of a glass roof structure.* Image. (In: Watts, A. 2016. *Modern Construction Handbook*. Basel: Birkhauser. pp. 224-227)




**Details**

1 | Extruded aluminium glazing profile
2 | Pressure plate and capping
3 | Mild steel support frame
4 | Double-glazed unit with recessed edge
5 | Thermal insulation
6 | Silicone seal
7 | Concrete base
8 | Gutter
9 | Internal finish

# 5.3 Floor structure

## Archive, New Foyer, Afrikaans exhibition, and Multi-functional exhibition:

These parts of the addition have the same floor structure and finish. The main structure is a reinforced concrete coffer slab according to the engineer's specifications. Also known as a waffle slab, a coffer slab consists of a thin toppings slab and narrow, but deep ribs running between columns (MPA, s.d.: online). Due to the weight of the archive and plaza, as well as the main courtyard, a coffer slab is the most cost-effective type of slab for the new basement structures.The slab is cast using pre-fabricated moulds. The specification for this project is Uni-span Holdings' Standard 900 series 625mm deep coffer slab syste. To achieve a smooth, even concrete finish, a range of Cemcrete floor products is applied (see Fig. 5.3.1). Movement joints are made in the top layer to create 900 x 900 mm tiles, preventing large, uneven cracking as the structure settles.

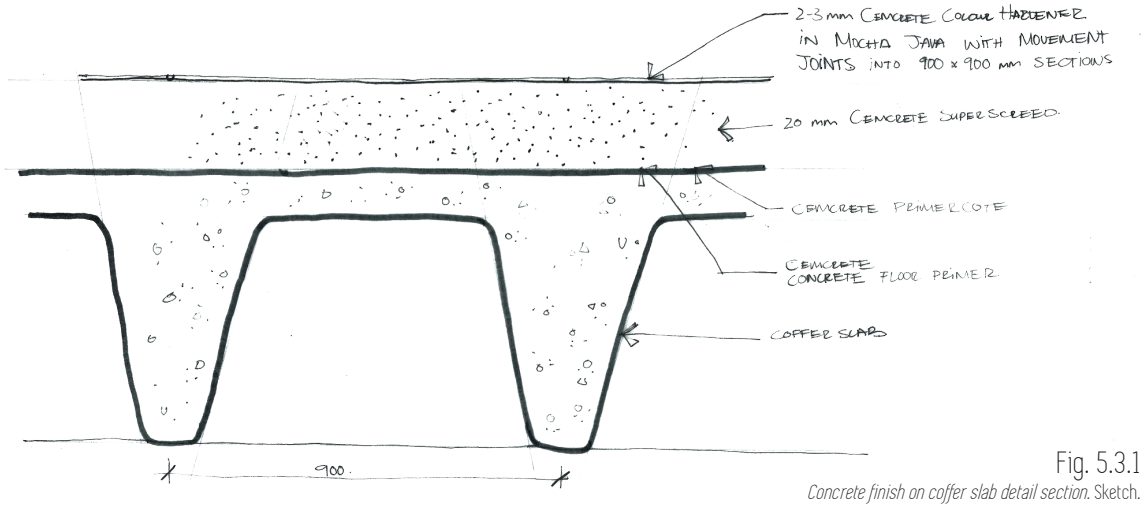



Fig. 5.3.1
*Concrete finish on coffer slab detail section.* Sketch.

## New exhibition wing:

The steel floor joists for the floor structure is placed inside the super-structure, flush with the top of the girders (see Fig. 5.3.2). On top of this is a 22mm plywood substrate, followed by wood flooring, laid perpendicular to the direction of the joists. The wood flooring has a tongue and groove connection, therefore it does not require any adhesive (Ching, 2014: 10.17).

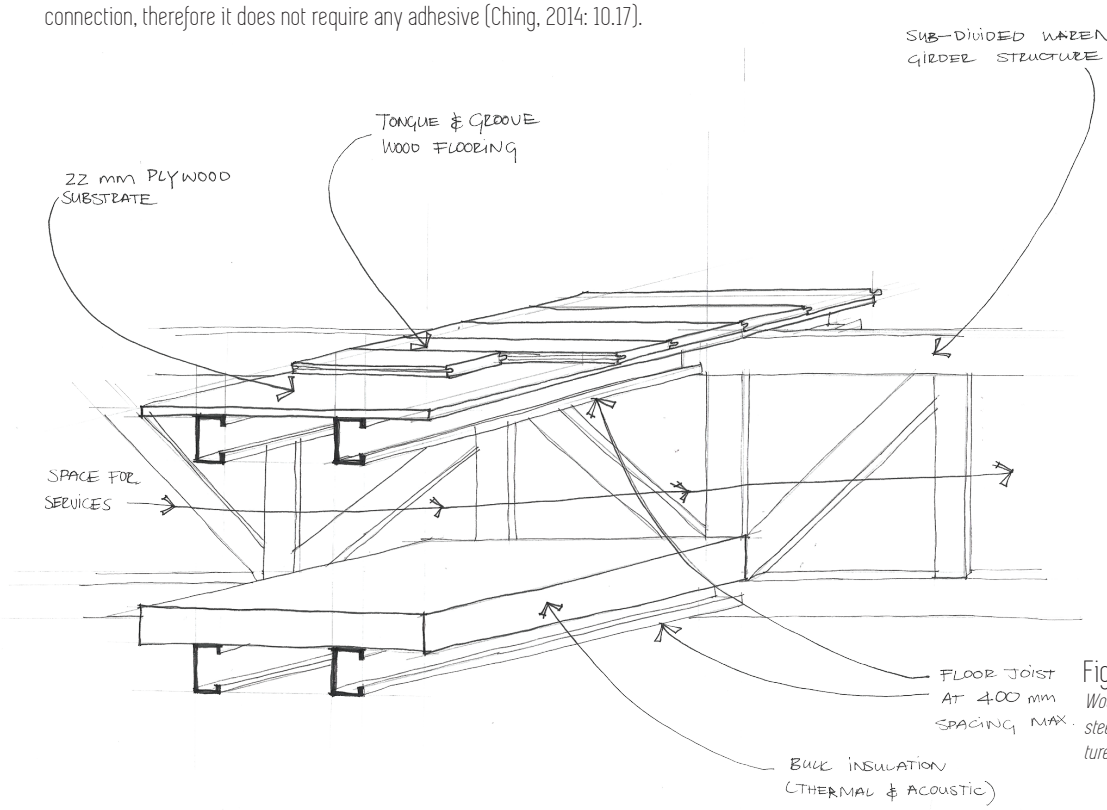
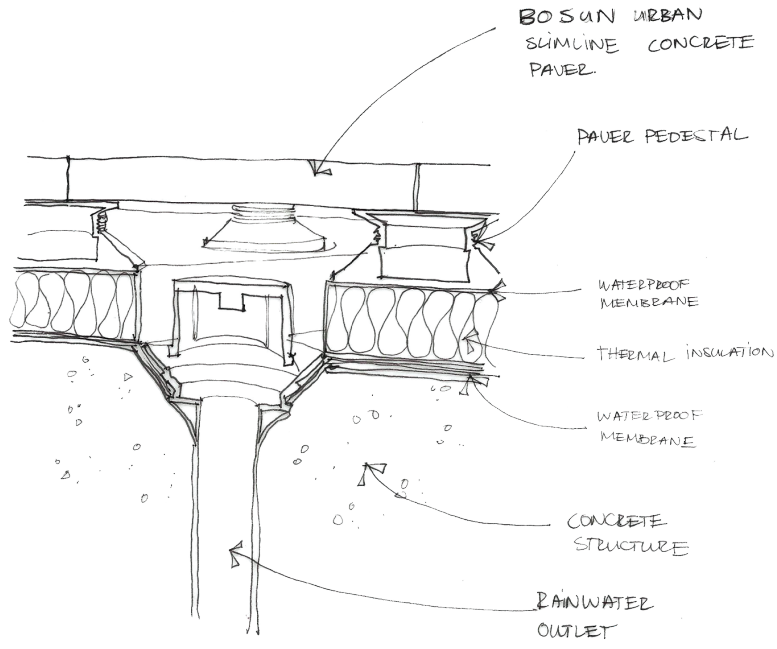



Fig. 5.3.2
*Wood floor finish on steel super-structure.* Sketch.

# 5.4 Roof structure

## East plaza/ Archive roof:

The roof slab over the archive forms the floor of the public plaza on the east side of the site. It is therefore treated as a trafficable flat concrete roof. The structure of this roof is a coffer slab. It is insulated and waterproofed as shown in Figure 5.4.1. The top waterproof layer (on top of the insulation) is protected by concrete pavers lifted on paving pedestals.This makes room for rainwater to flow underneath the pavers, innto the waterchannels and rainwater outlet. The rainwater outlet is cast into the slab, leading water away from the structure.



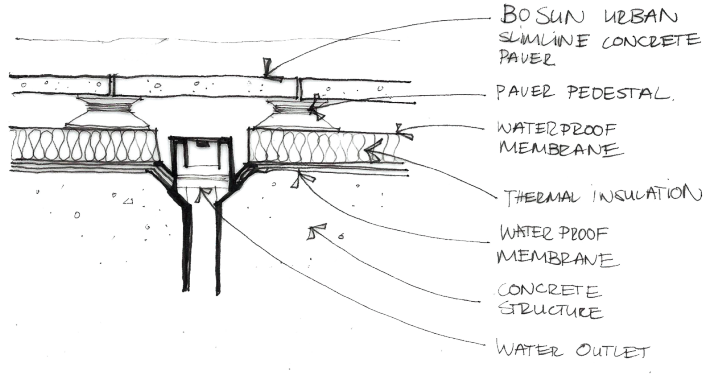




Fig. 5.4.1

*Waterproofing detail of concrete roof.* Sketch (Redrawn from: Watts, A. 2016. Modern Construction Handbook. Basel: Birkhauser. pp. 237)

## Main courtyard green roof:

The roof of the new basement under the Main courtyard will be a flat green roof structure. This has to be a heavy planted green roof type, since the historic orange trees and a walkable lawn is planted here. Figure 5.4.2 demonstrates the different substrate depths required for different plants.
The waterproofing of a heavy planted green roof is illustrated in Figure 5.4.3. According to Watts "[h]eavy planted roofs require regular maintenance, provided by paved paths or by areas of grass." (2016: 245). This access is provided along the perimeter of the courtyard and\pebbled pathways across the courtyard.

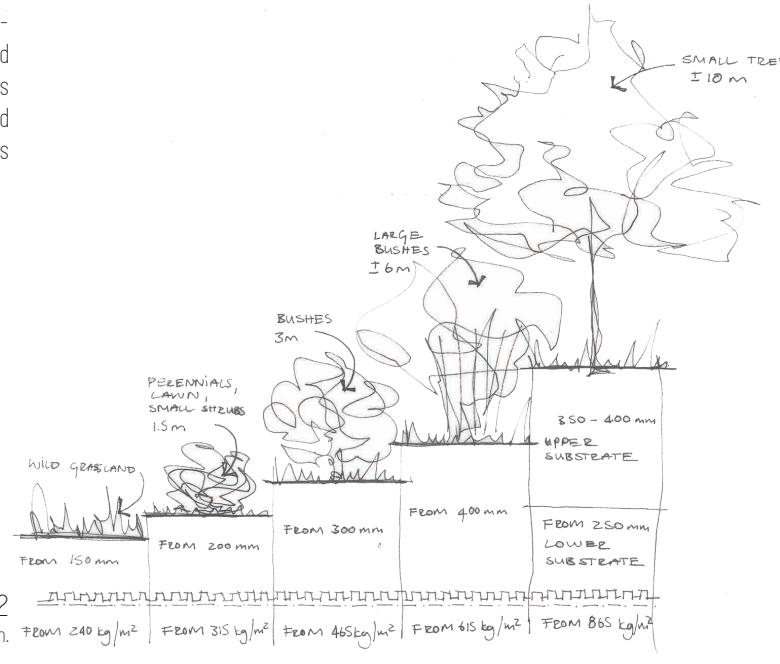



Fig. 5.4.2

*Substrate depths required for different plants and trees.* Sketch.

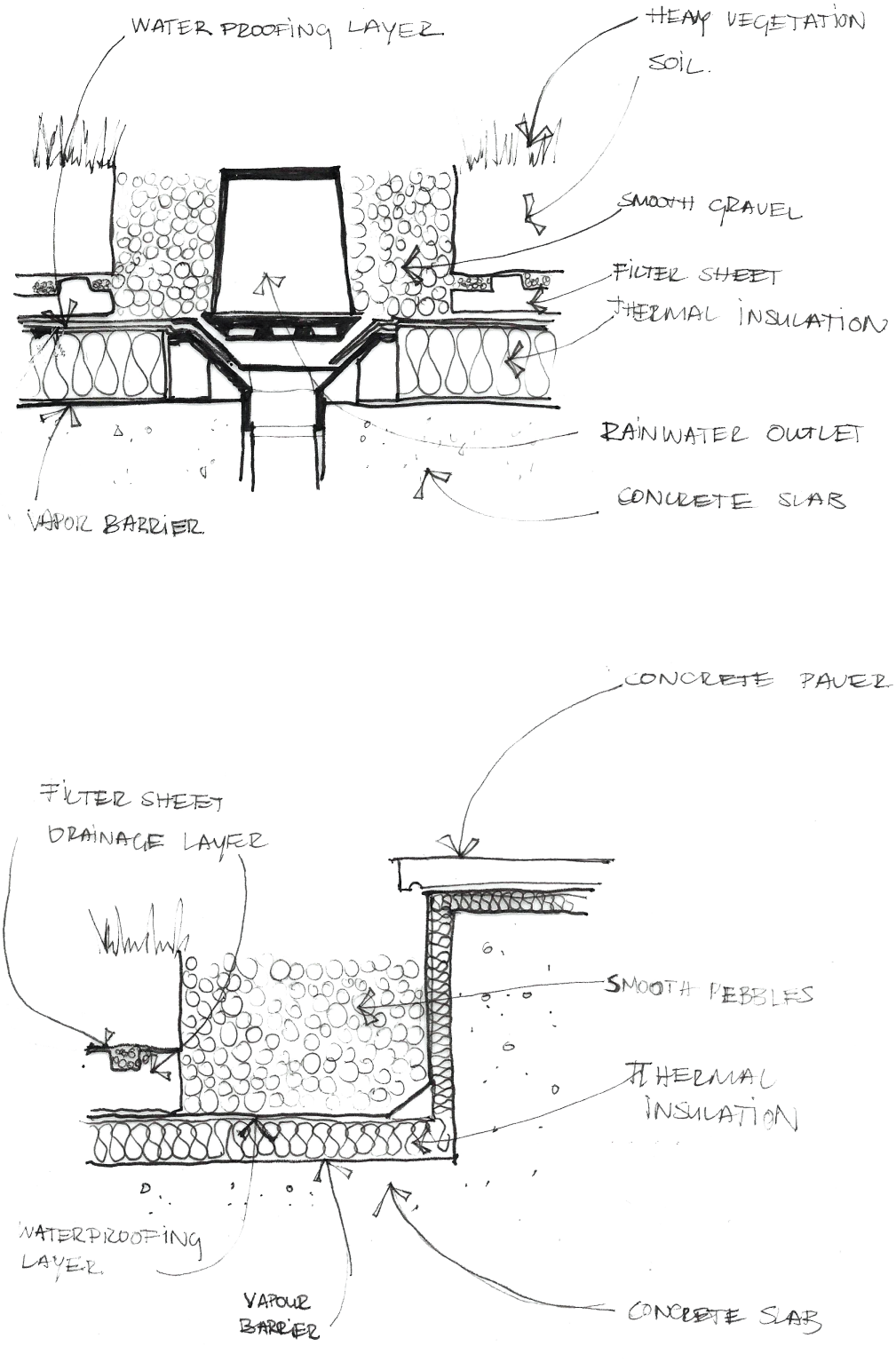



Fig. 5.4.3
*Waterproofing details of a heavy planted roof.* Sketch. (Redrawn from: Watts, A. 2016. *Modern Construction Handbook. Basel: Birkhauser.* pp. 244-245)

New exhibition wing:

The roof and external walls of the new exhibition wing is an integrated copper clad system. Copper has an estimated lifespan of 100 years, due to the natural, green patina that forms over time. This acts as a protective shell. (Copper Development Association Inc, s.d. online)

The sketches in Figure 5.4.4 illustrate some detailing for double lock standing seam system. The gutter ofthe roof is built in behind the walls (see Fig. 5.4.5). This is to achieve a cleaner form on elevation.

Concerning corrosion, copper will cause the deterioration of any metal it comes into contact with (Copper Development Association Inc, s.d. 14). Thus, the steel super-structure of the new wing exhibition is isolated from the copper cladding by a substrate. This substrate also provides the necessary rigidity for the copper sheeting itself, which is very thin and malleable.

As with the floor structure, the depth of the girders in the super-structure provides enough space for insulation and other services within the structure of the roof.

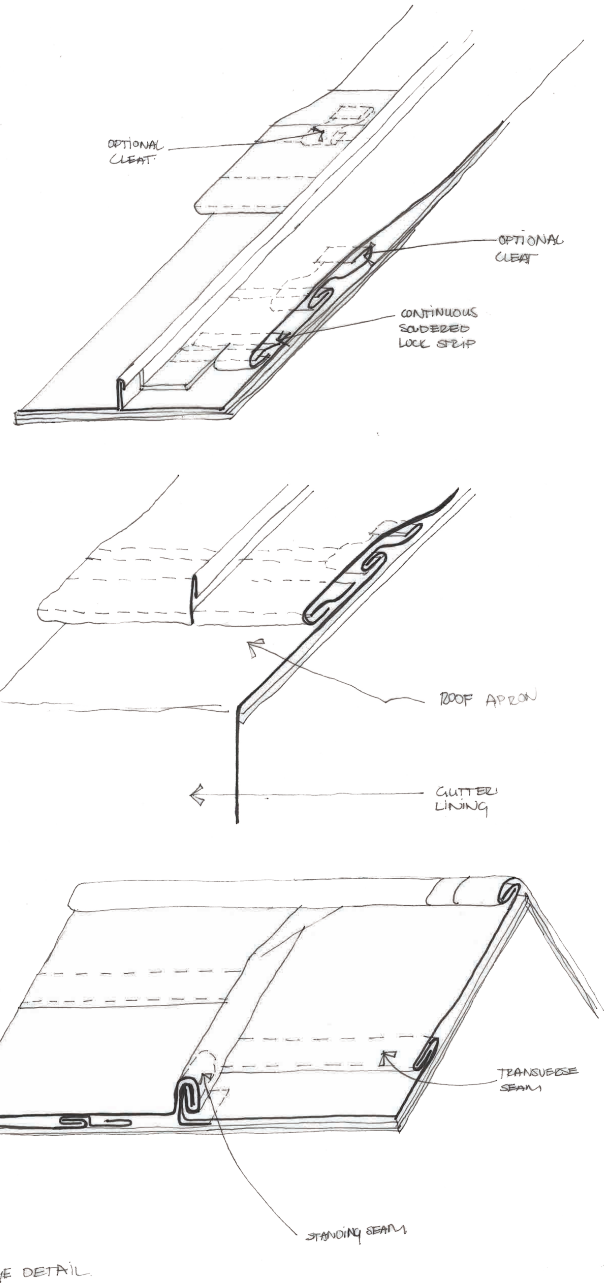



Fig. 5.4.4
*Double lock standing seam connection details for copper*. Sketches. (Redrawn from: Copper Development Association Inc. s.d. *Copper in Architecture: a comprehensive compilation of designs, details and specifications*. pp.61-65).

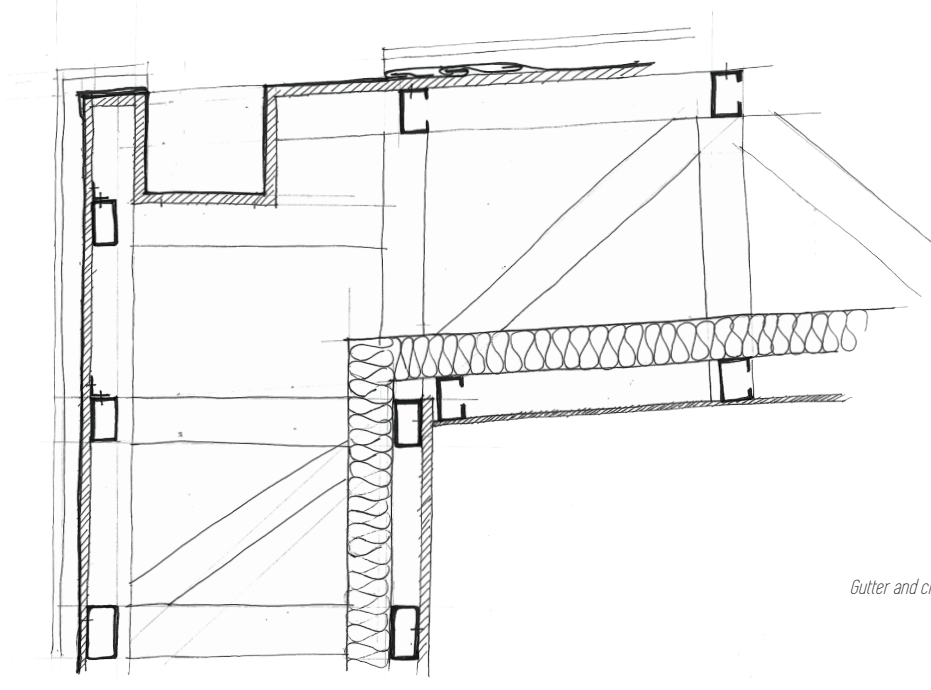
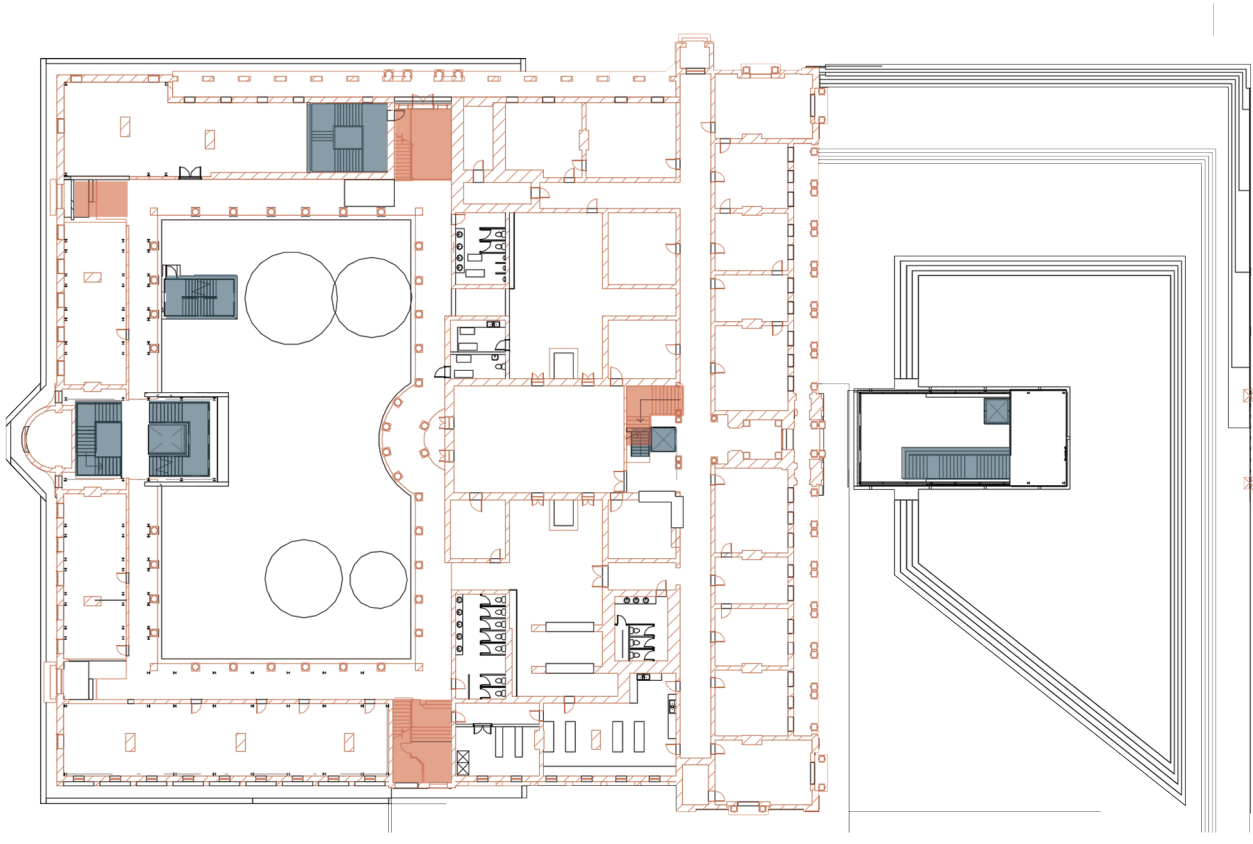
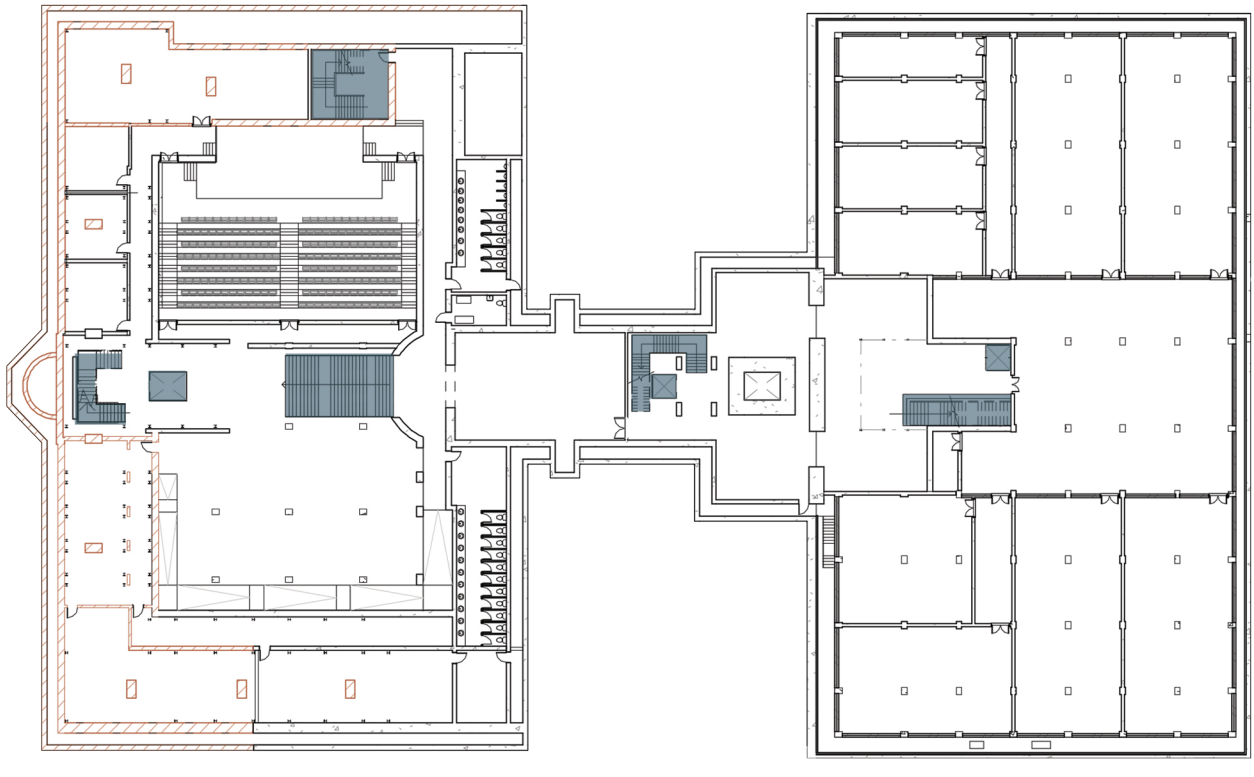


Fig. 5.4.5
*Gutter and cladding detail.* Sketch.

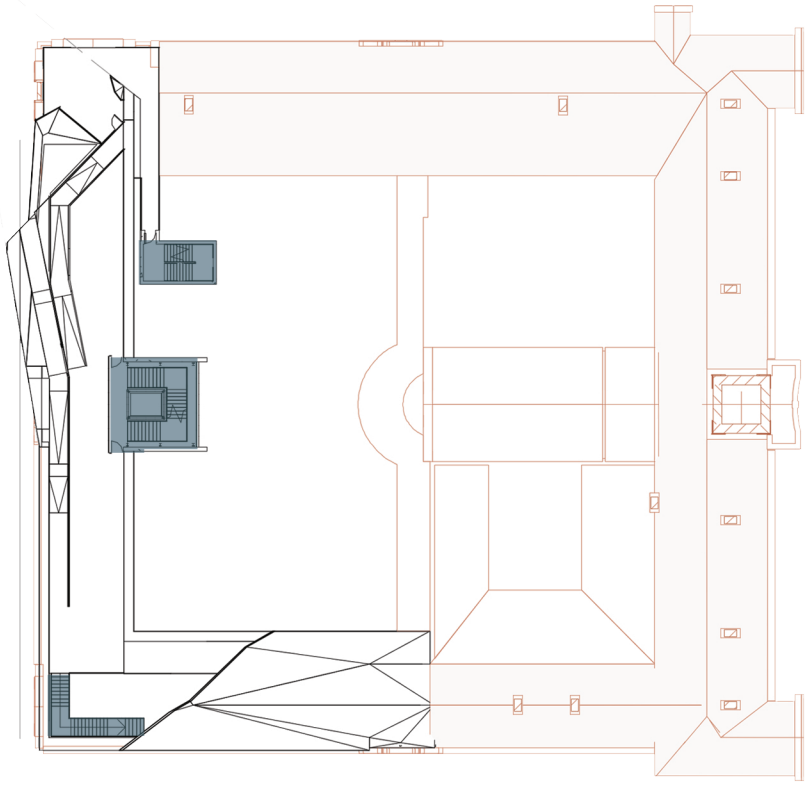
# 5.5.1 New and existing circulation points



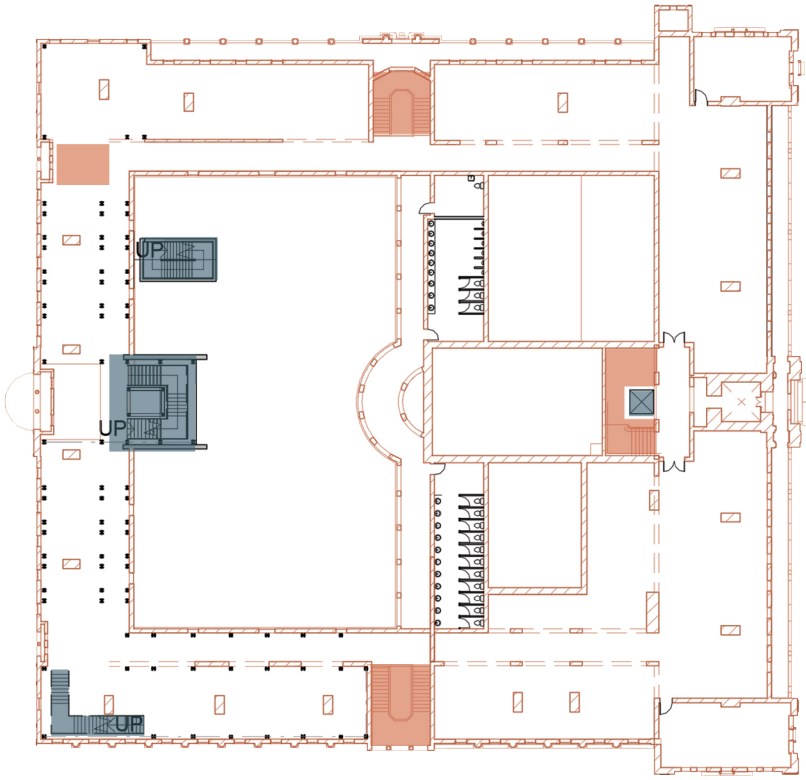
Ground Floor Plan



Basement Plan



Second Floor Plan

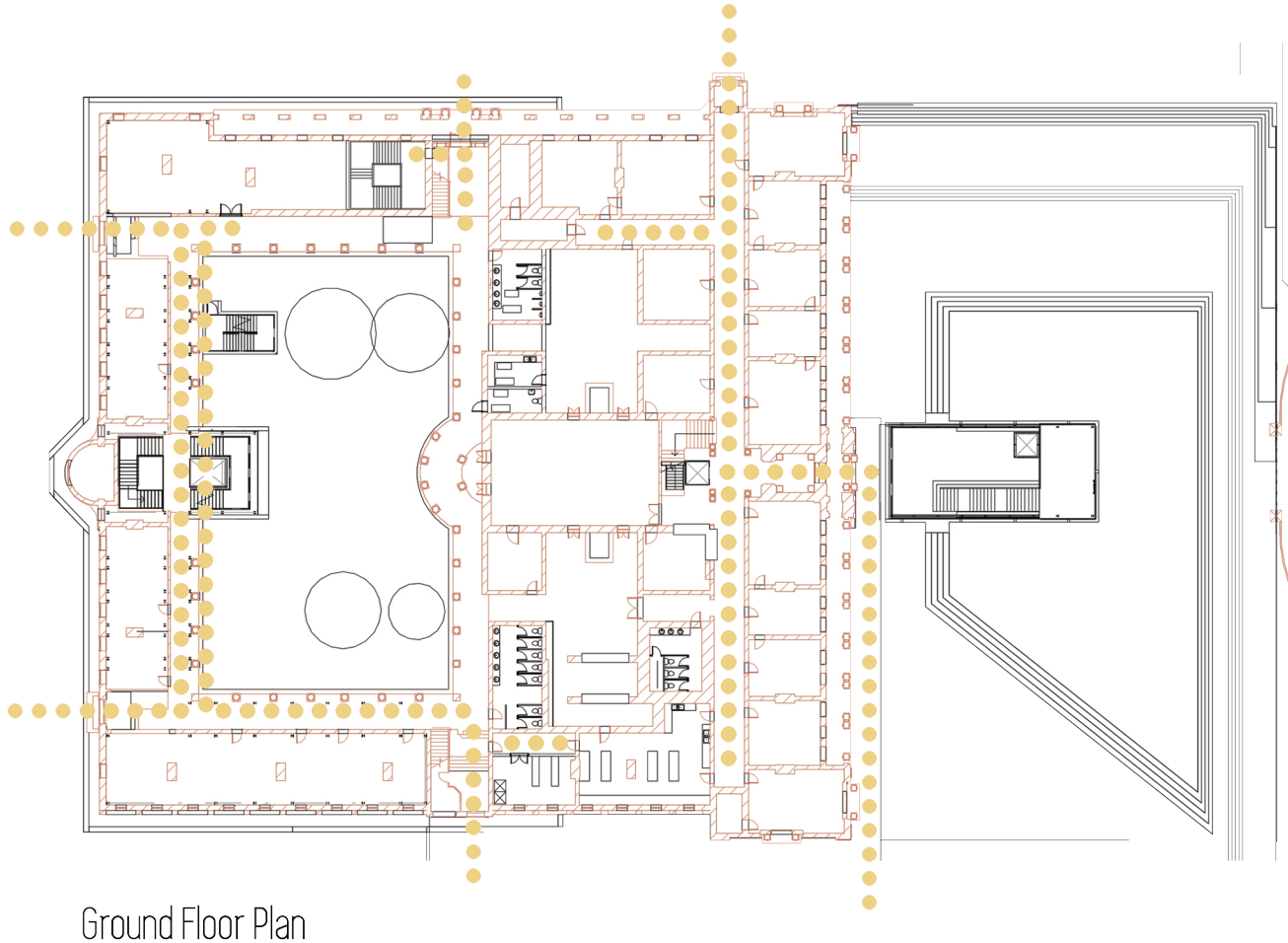



First Floor Plan

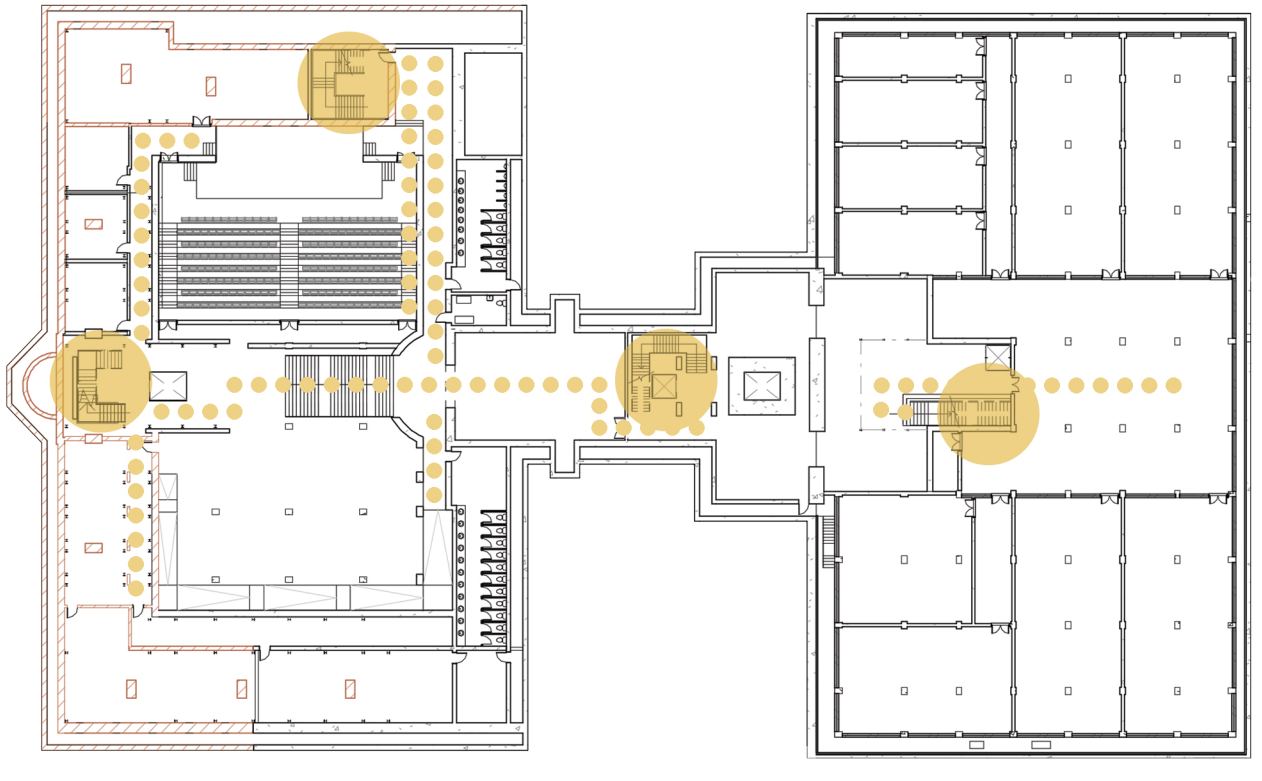
Existing

New

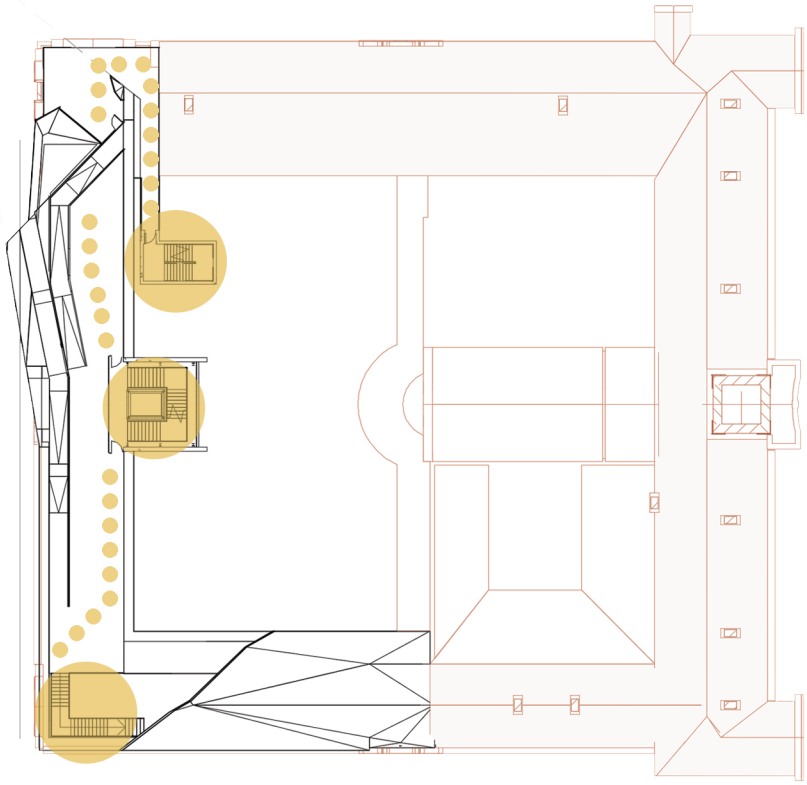
# 5.5.2 Fire escape routes



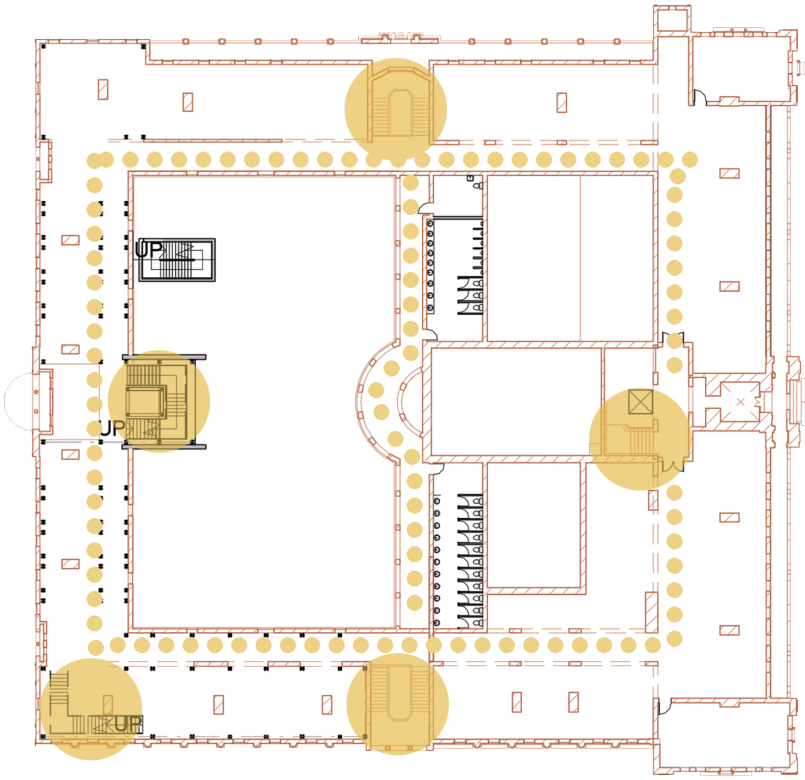
Ground Floor Plan



Basement Plan



Second Floor Plan




First Floor Plan

# 2.8 Design methodology

## Touchstone

*transformasie*

def: to change something's appearance to reveal the unknown.

Design cues:
- transformation
- revelation
- unconcealing
- one, not two

## Formative Conceptual Ideas

The echo –
transformation through repetition

Underground
transformation – unseen transformation

Anti-tautology –
complete contrast, no repetition

Transforming the root –
attaching new to transform the existing

Design cues:
- heritage
- axis
- tower
- historic vista
- urban connection
- contemporary vs historic

## Topology

- reconnect to public life
- acknowledge urban axis
- address tower status

Design cues:
- heritage
- axis
- tower
- historic vista
- urban connection
- contemporary vs historic

# Typology

- better application of functional typologies
- adaption to new use as conservation
- needs to function as contemporary public institution

Precedents:
-NALN
-NELM
- Morgan Library Renovation & Expansion

*- implement conservation policy*

Design cues:
- adaption
-addition
- purpose-built
- new use
- contemporary
- public building for current public
- underground archive & auditorium
- archive process
- accommodation list

# Morphology

*Theoretical discourse:*
- *Heidegger and language*
- *Norberg-Schulz and the language of architecture*
- *Heidegger and poetic dwelling*

*Precedents:*
- *Castelvecchio Museum*
- *Documentation Centre Nazi Party Rally Grounds*
- *Hedmark Museum*
- *Jewish Museum Berlin*
- *Antwerp Port House*
- *Dresden Military History Museum*
- *CiaxaForum Madrid*
- *Nelson-Atkins Museum of Art*

Design cues:
- language
- phenomenology
- speaking
- bidding
- being
- thing & world
- gathering the four-fold
- dif-ference /threshold
- listening to the silence
- responding appropriately
- voice of place
- typical spatial organization
- archetypes
- form articulation
- connection
- unconcealing as poetic act

# Tectonics

*Structural philosophy: Articulation through the detail*
- *Frascari's The Tell-the-Tale Detail*
- *Gregotti's The Exercise of Detailing*

*Technical report: Spatial requirement specific design*

Design cues:
- articulation vs cohesion
- mechanical systems
- UV protection
- Type C drained cavity
- sustainable landscaping
- archive requirements
- museum requirements
- auditorium requirements
- mechanical room requirements
- basement underpinning
- steel structure
- cladding
- fire safety




Part
03

# Overview

Part 03 of this document explains the analysis and integration of the knowledge gathered in Part 02 to generate an architectural response to the brief. Again, this process is not linear, as the gathering and application are co-dependent processes. In fact, it could be said that the design process already starts with the touchstone.

From the precedent studies, it becomes clear that there are a variety of possible responses to heritage buildings, ranging from highly aggressive to overly sensitive. My own design process is therefore very experimental, in order that the full scope of possibilities can be considered, before proceeding towards a final design proposal.

The design exploration consists of eight phases, where there is continuous back-and-forth movement between experimentation and evaluation. This is useful in moving towards a final design that considers all the possible responses. Concept models play a large role in this development. These models are also developed through sketch plans and elevation sketches to ensure constant cohesion between typology, topology and morphology.

# 3.1 Design exploration

3.1.1

# Phase 01

first five experimentations

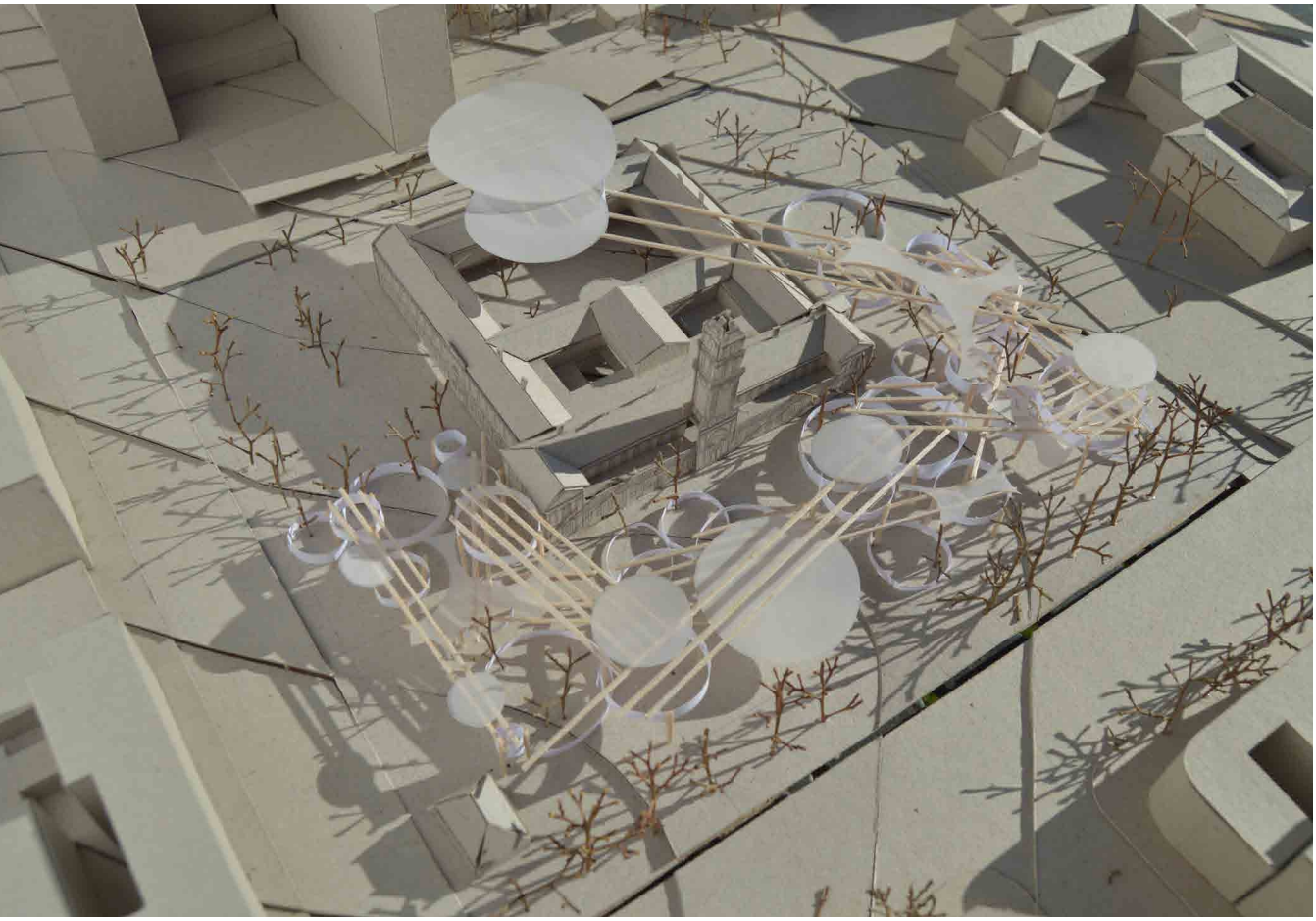
The first phase of the design development process involves several 1:500 models that are used to experiment with different architectural interpretations of the knowledge gained up to this point. This produces 5 initial architectural concepts:

## The layered canopy 1.0
(model 01)

## Approach:
- Reconstruct heritage tree garden with man-made canopy.
- Play with different levels - garden pavilions, landscaping, skylights, underground openings.
- The new becomes a layered threshold between President Brand Street and Main entrance.
- Important canopy over main courtyard with connection to external extension.

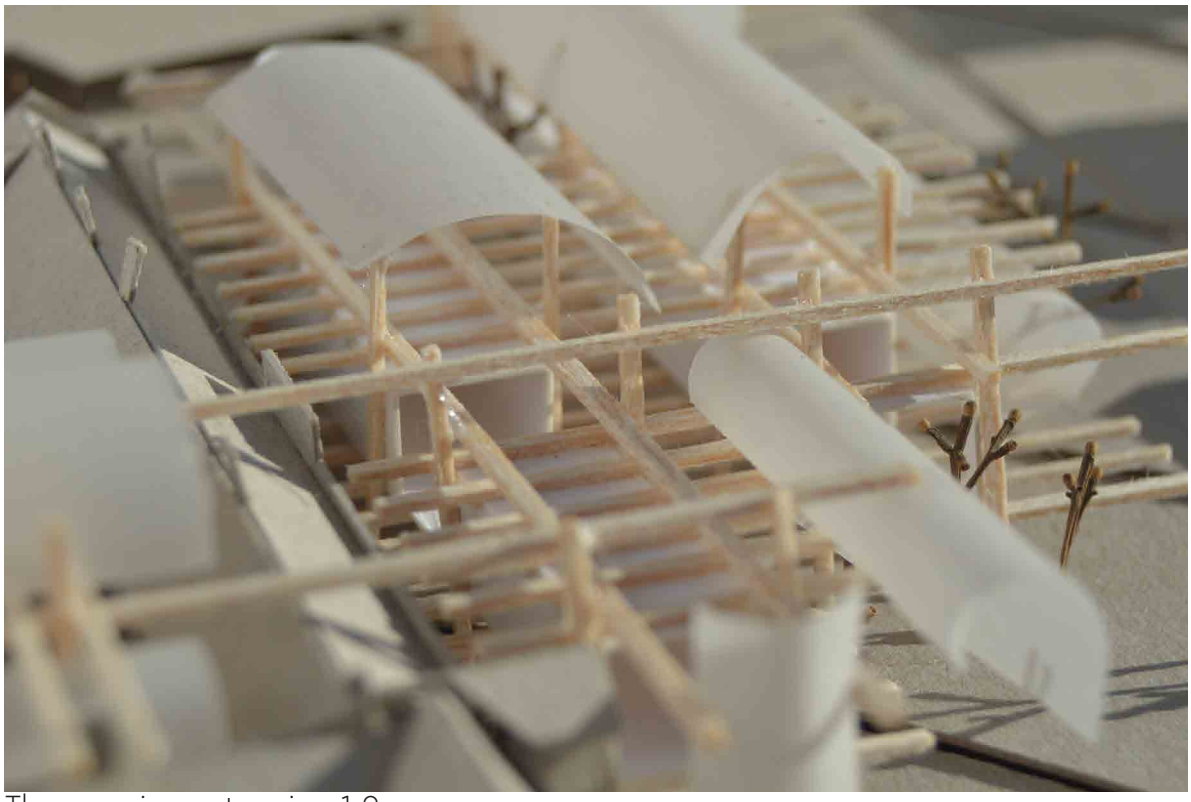
## Critical reflection:
- Recognizes the importance of addressing the landscaping around the building as a threshold that must engage with the public.
- Too densely grouped, although this can be addressed in further development.
- The east elevation is the most important, yet it becomes completely obscured by the volume of the new additions.
- Brings to light the challenge of engaging with the east entrance and garden without stealing attention from the heritage building.











# The growing extension 1.0

(model 02)



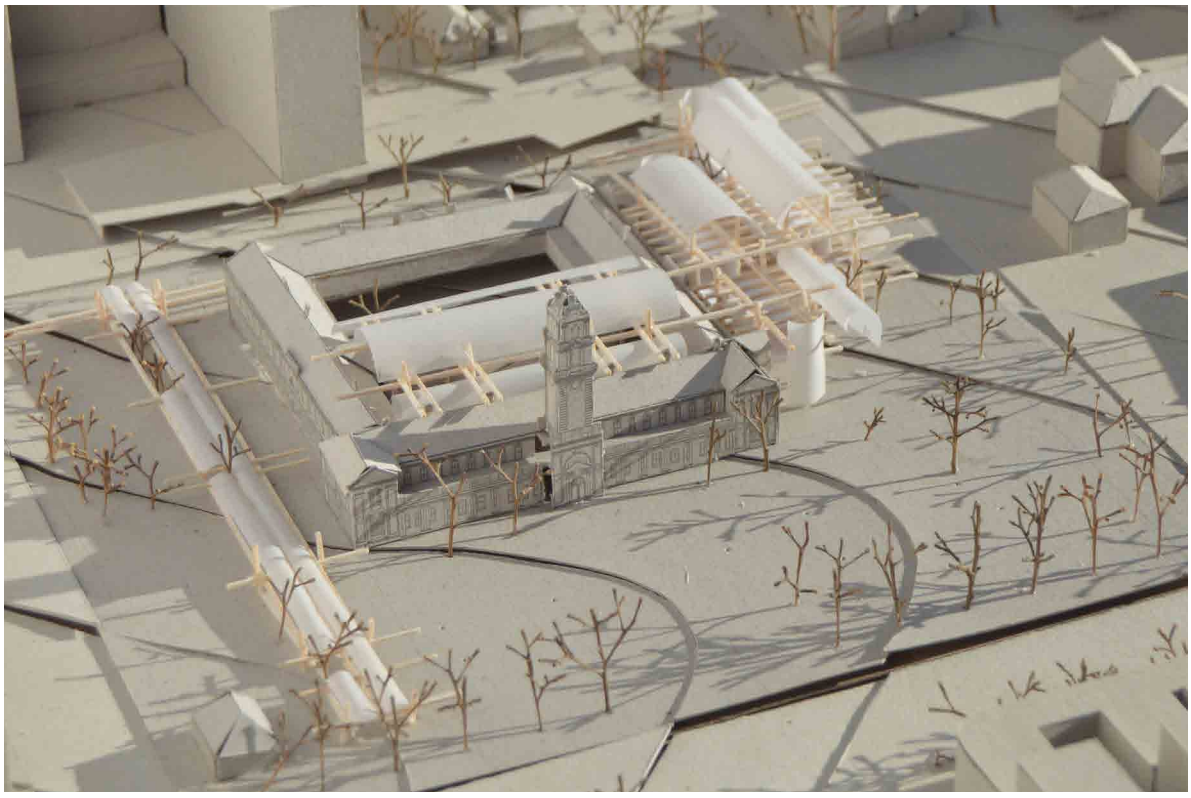
## Approach:

- Rhythmic repetition of northern exhibition wing towards east side of the site where the most pedestrians are.
- Open ground floor to public interaction.
- Connect to existing through entrance foyer under new glazed roof.
- Light structure growing out of existing.
- Layers of in-between spaces over, under and

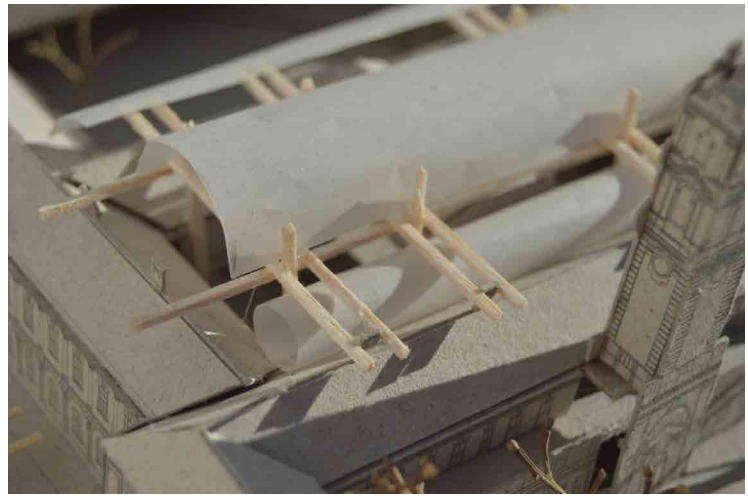
between different wings.

## Critical reflection:

- More sensitive approach, that listens to the existing, picking up on its rhythm as a guide for the new structure.
- Engages with public on the east side of the site, but does not address the east side of the site, which is the main entrance to the site.
- The language of the proposed design does not really challenge the heritage building.
- Other than the new roof over the Third Raadsaal and small courtyards, there is no engagement with the interior spaces of the existing.







# The floating pavilions 1.0

(model 03)

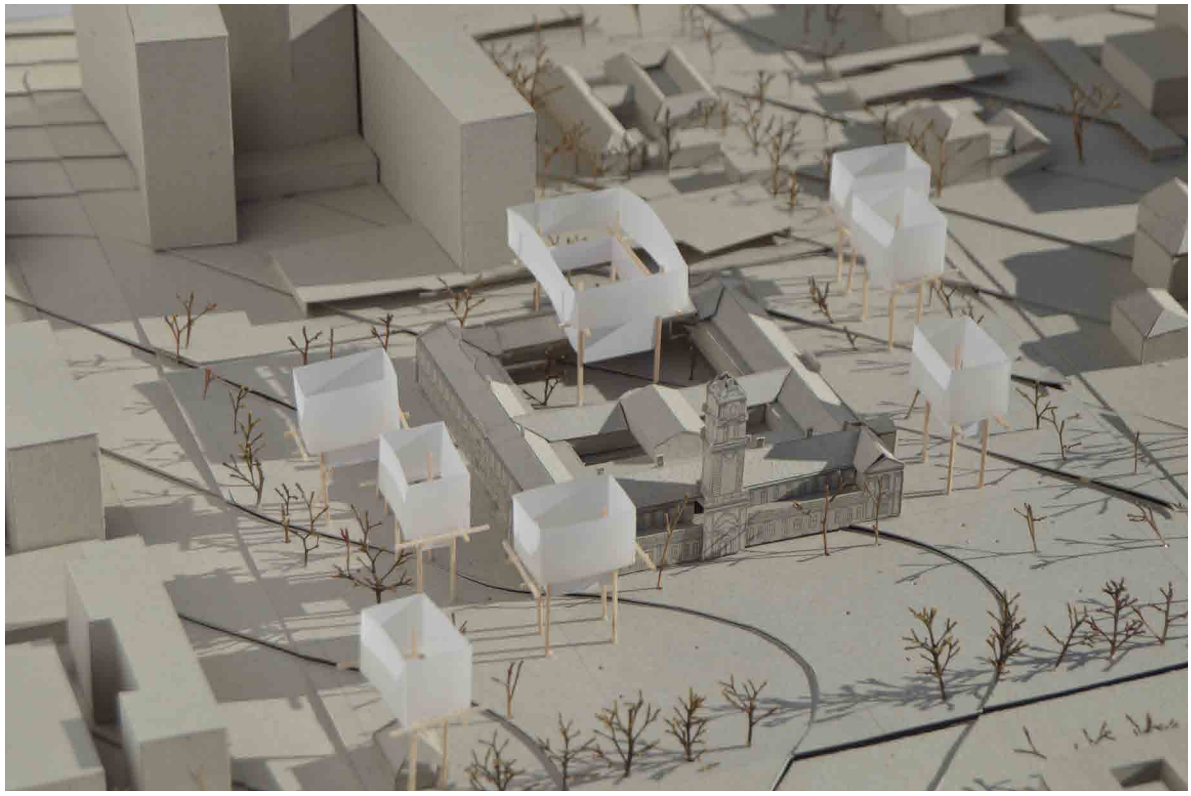
## Approach:

- New exhibition pavilions scattered around site.
- Blends into historic tree garden.
- Soften urban threshold.
- Open on ground level - public dwelling space.
- Closed exhibition box on first floor level.
- Translucent light box on upper levels - viewing decks
- challenge status of tower.

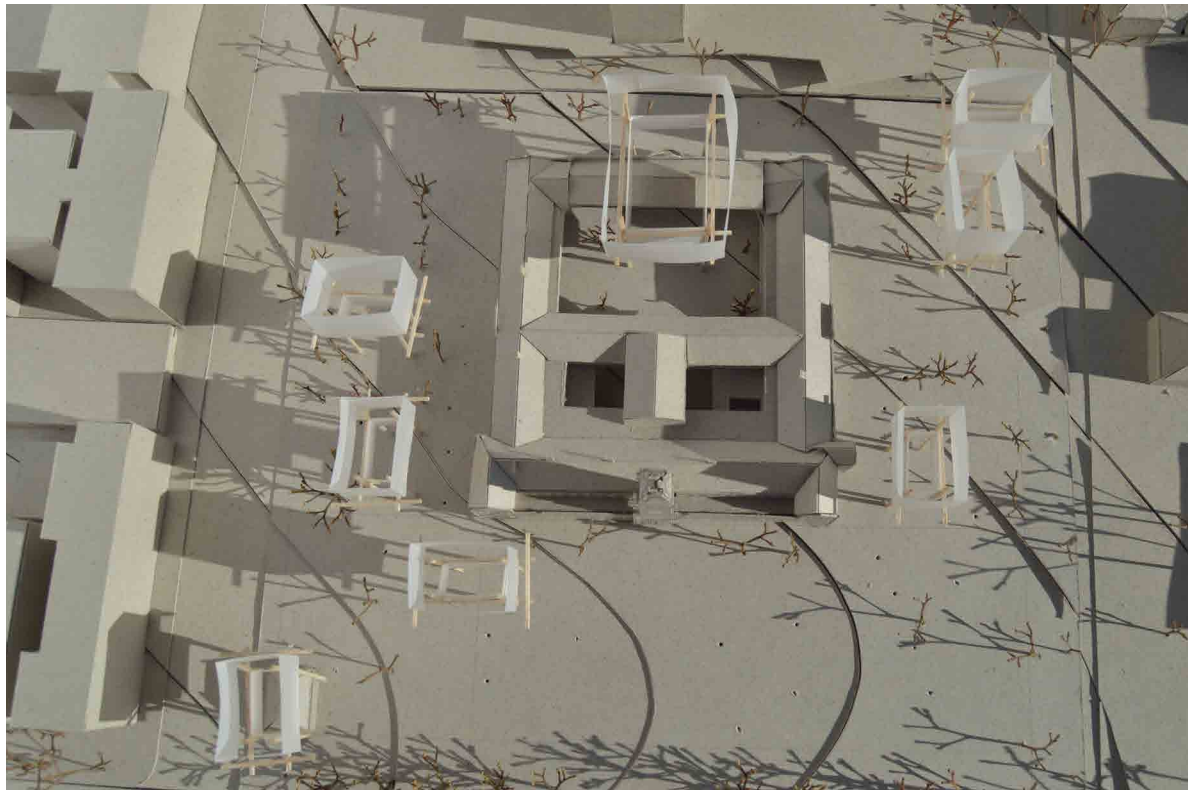


## Critical Reflection:

- Playful way of bringing the interiority of the heritage building to the public in the garden.
- Seems aggressive, but lifting the pavilions up from ground level allows for views of the heritage building's facades.
- Interesting way of defining new spaces in the garden.
- Not true to the concept of transformation in the touchstone
- the pavilions are new elements sitting on top of the old, rather than the old becoming something new.







# The extended gathering spaces 1.0

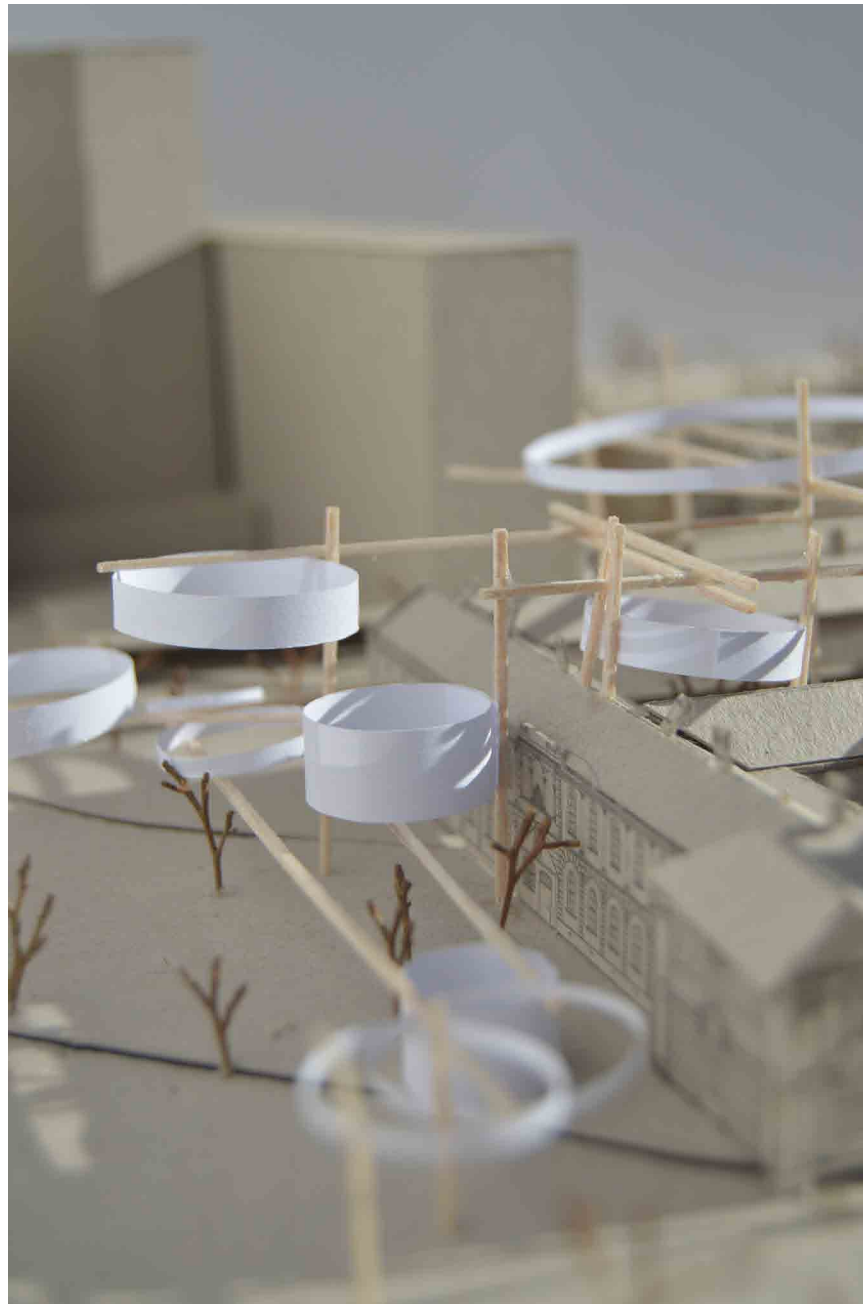
(model04)

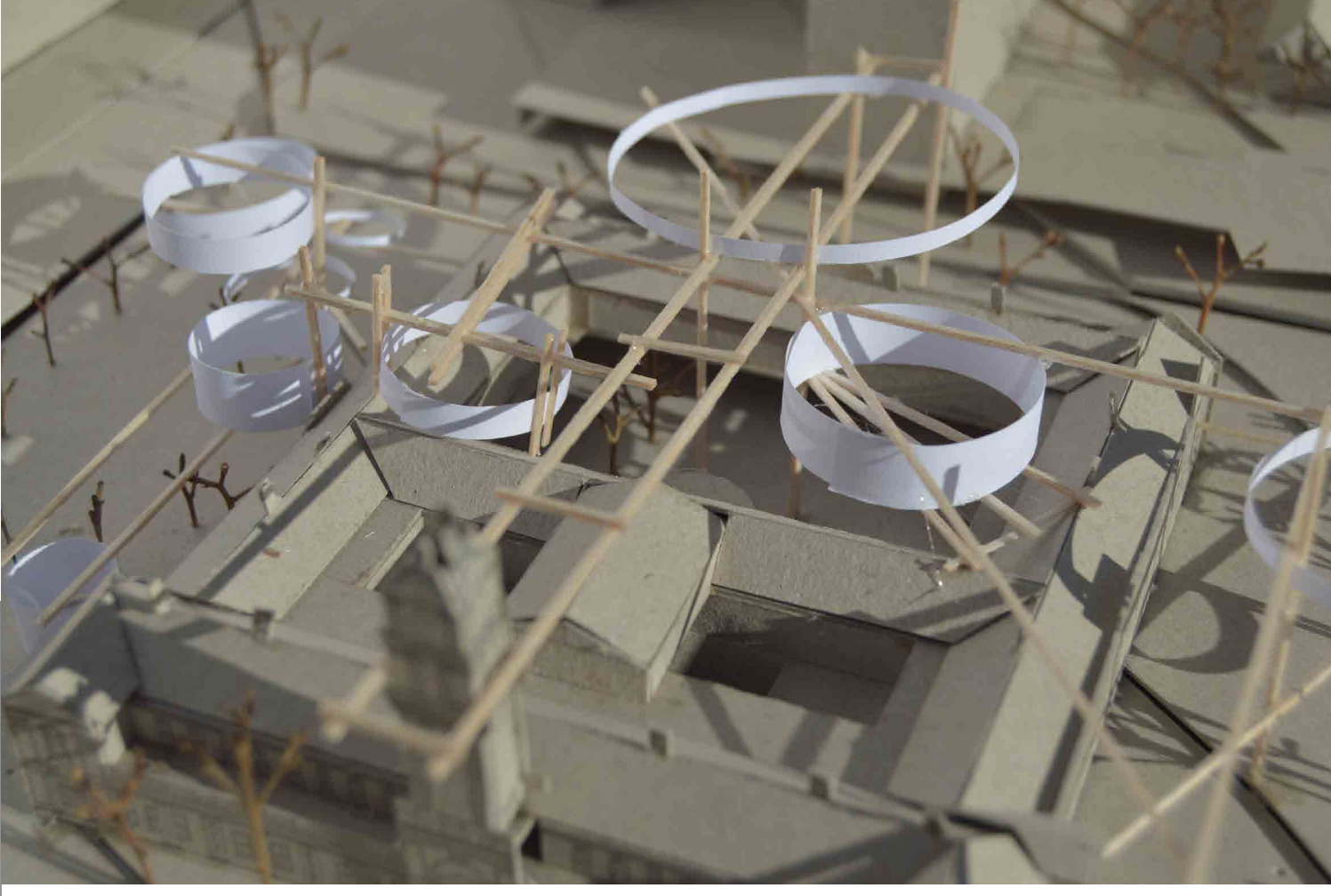
## Approach:

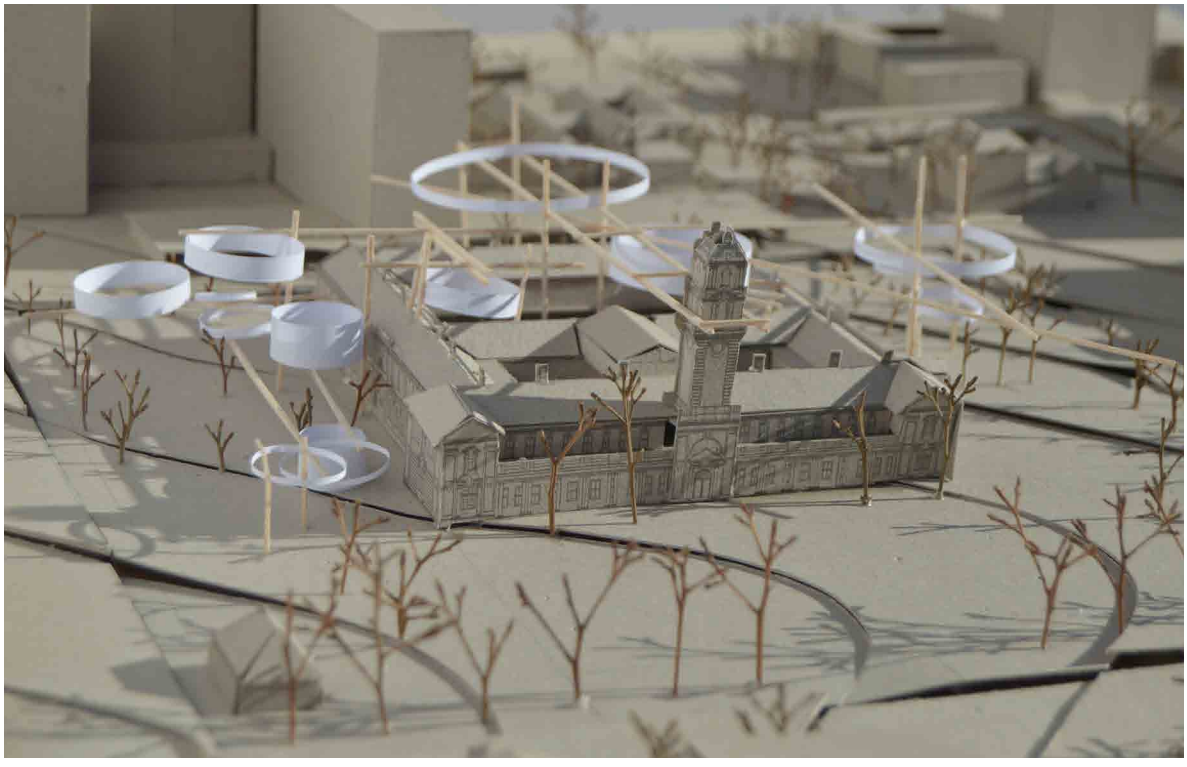
- Starting from main courtyard, outward extending network of gathering spaces.
- 'Jumps' over existing building.
- Lightness of structure makes more sensitive.
- Different sizes and heights of gathering spaces.
- Softly challenge the rigidity of the existing plan layout.

## Critical reflection:

- No clear connection between the morphology of the new and old.
- More of a three-dimensional diagram than an architectural model  suggest space for intervention to take place, rather than what that intervention should say about the heritage building.
- Hints at the need to engage with the Old Government Building tower.







# The hovering future 1.0

(model 05)

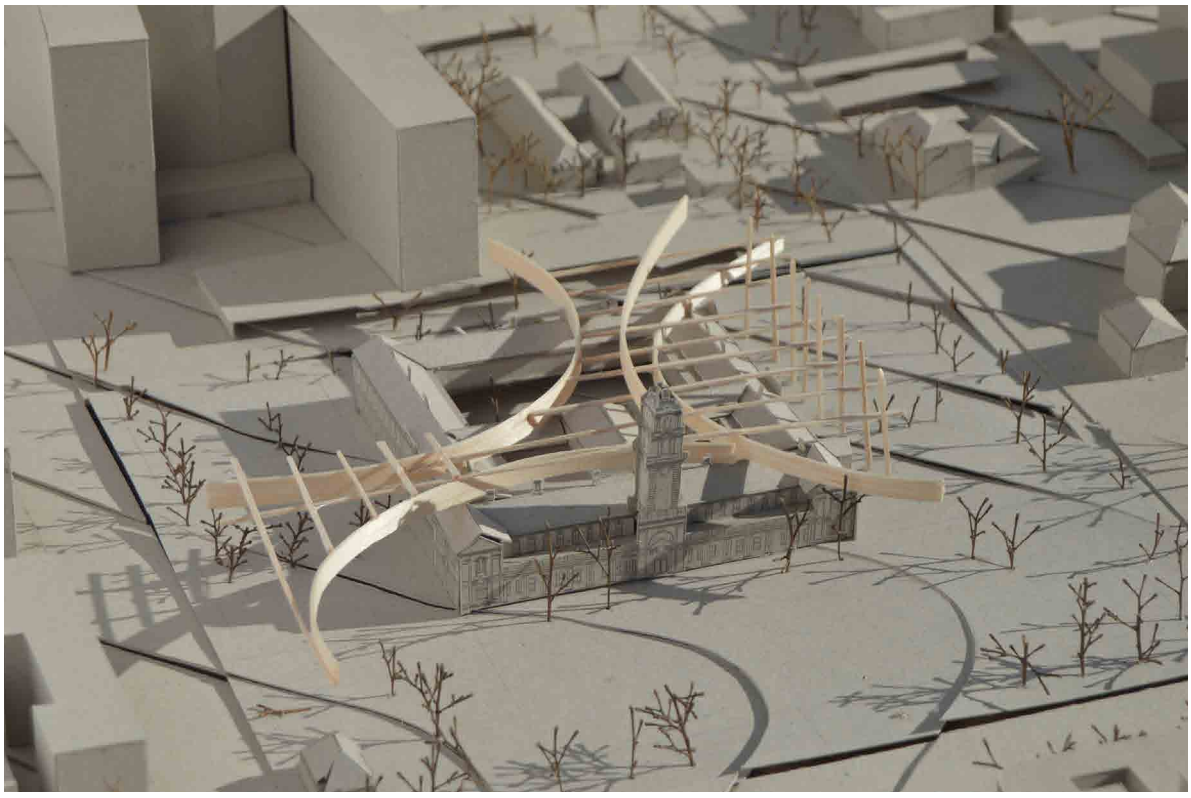
## Approach:

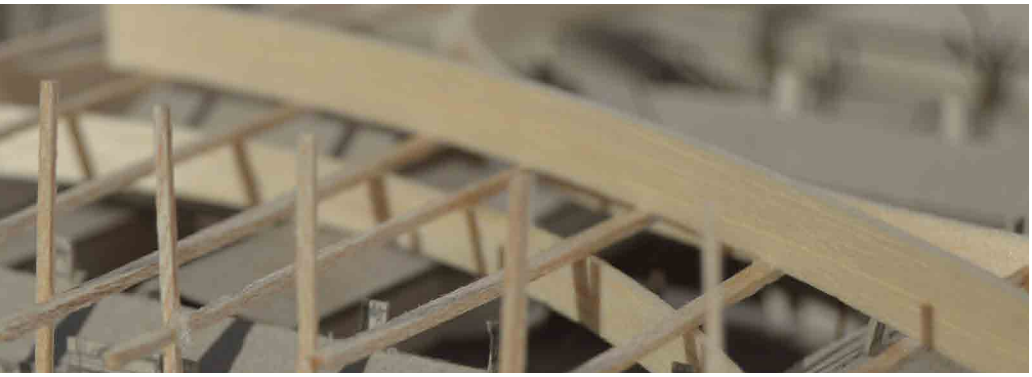
- More aggressive approach.
- Complete contrast to existing.
- Hovers over existing.
- Shouts to be seen.
- Curving forms create in-between spaces for exhibition and public archive within existing.
- Curving walls define variety of spaces within strong form.

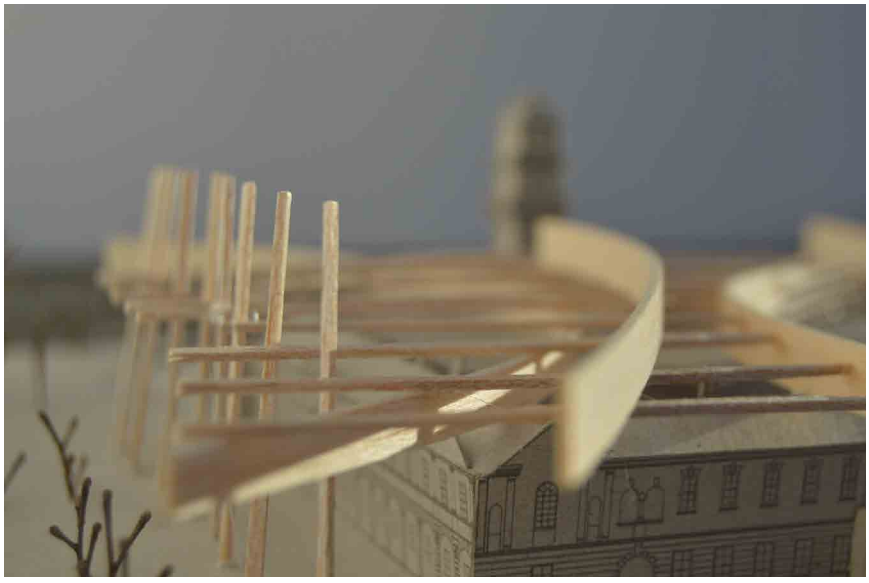


## Critical reflection:

- Very foreign morphology, lacks connection to the old, explaining where this form comes from.
- Will need a lot of development to become a structurally viable design proposal.
- Sweeping curves introduces an engaging dynamic quality, which challenges the existing rigidity.
- Does not address the site around the heritage building.







3.1.2

# Phase 02

interpretation into three architectural forms

In phase 02, three of the five model experimentations in phase 01 are developed from concepts into architectural forms with potential spatial layouts. Through this further development it can be determined whether they are feasible design proposals.

## The growing extension 2.0

(model 06)

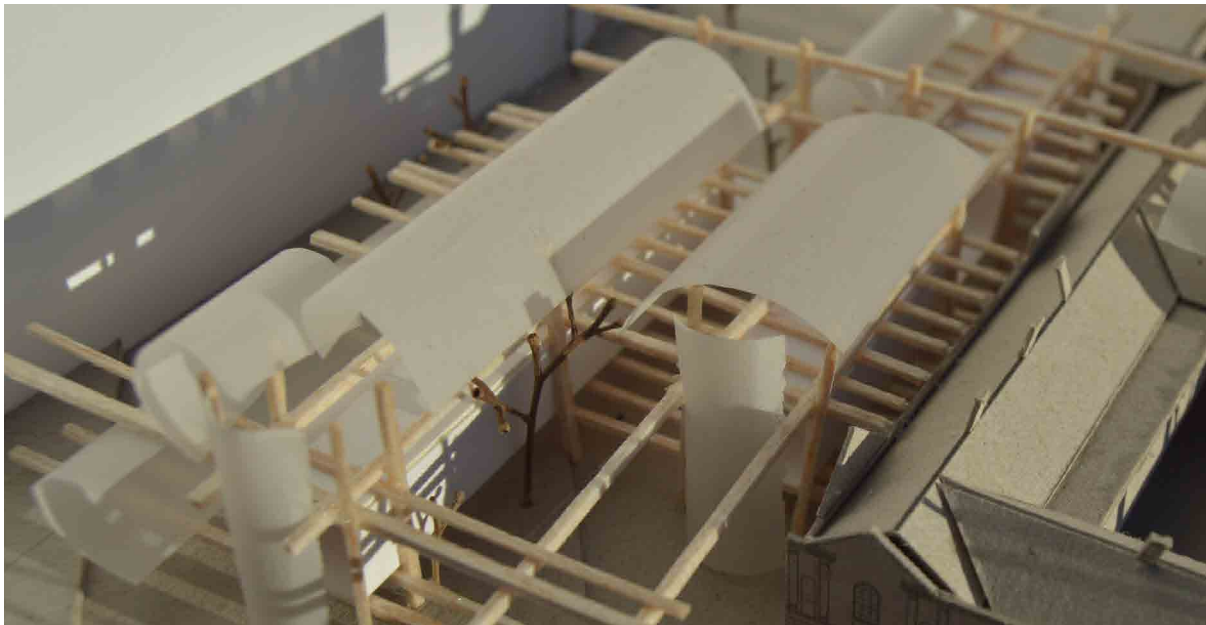


## Approach:

- The first exploration model already suggests a building, with structure, boundaries and the correct scale/proportions.
- A feasible spatial layout was developed for this concept, with the main entrance remaining the heritage tower, the museum moving out to the new additions and the archive being incorporated into the Old Government Building.

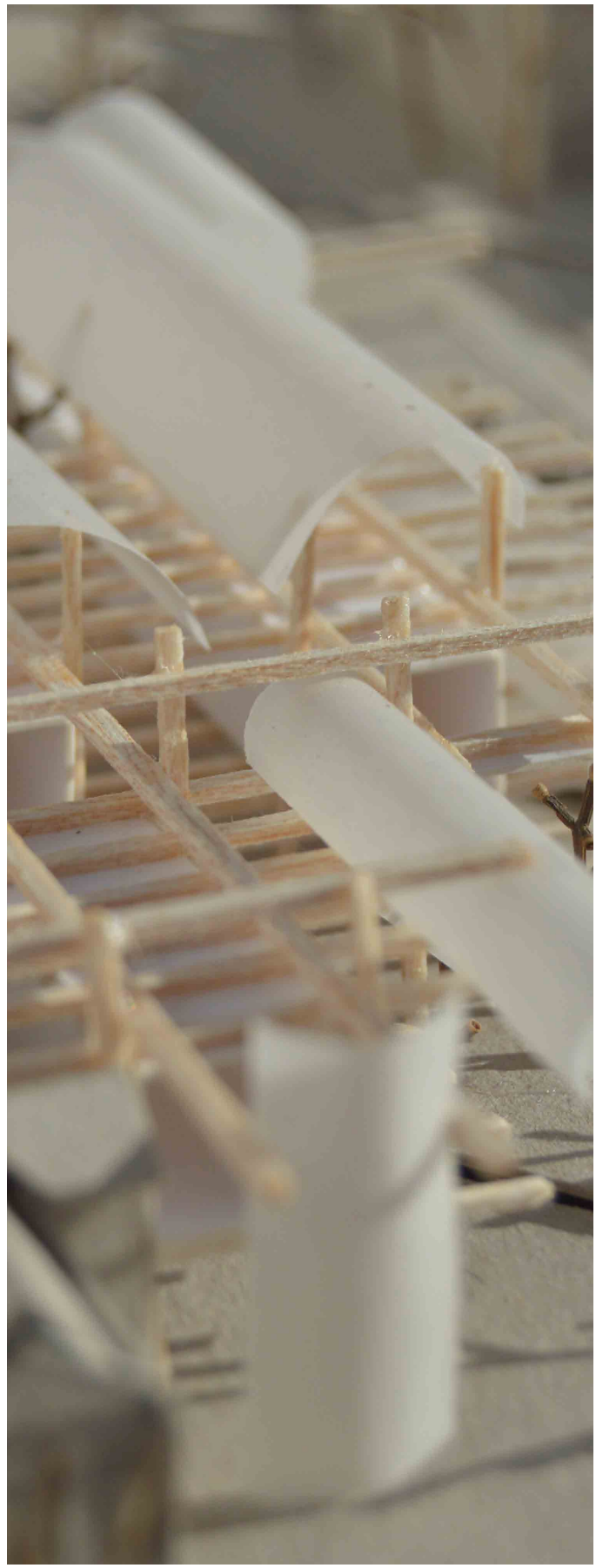
## Critical reflection:

- The regularity of the phase 01 model made this an easy concept to develop into a feasible proposal.
- The entire concept still lacks innovation in addressing the question of heritage adaptation a conventional approach that makes little change to the dialogue between old and new.









# The floating pavilions 2.0

(model 07)

## Approach:

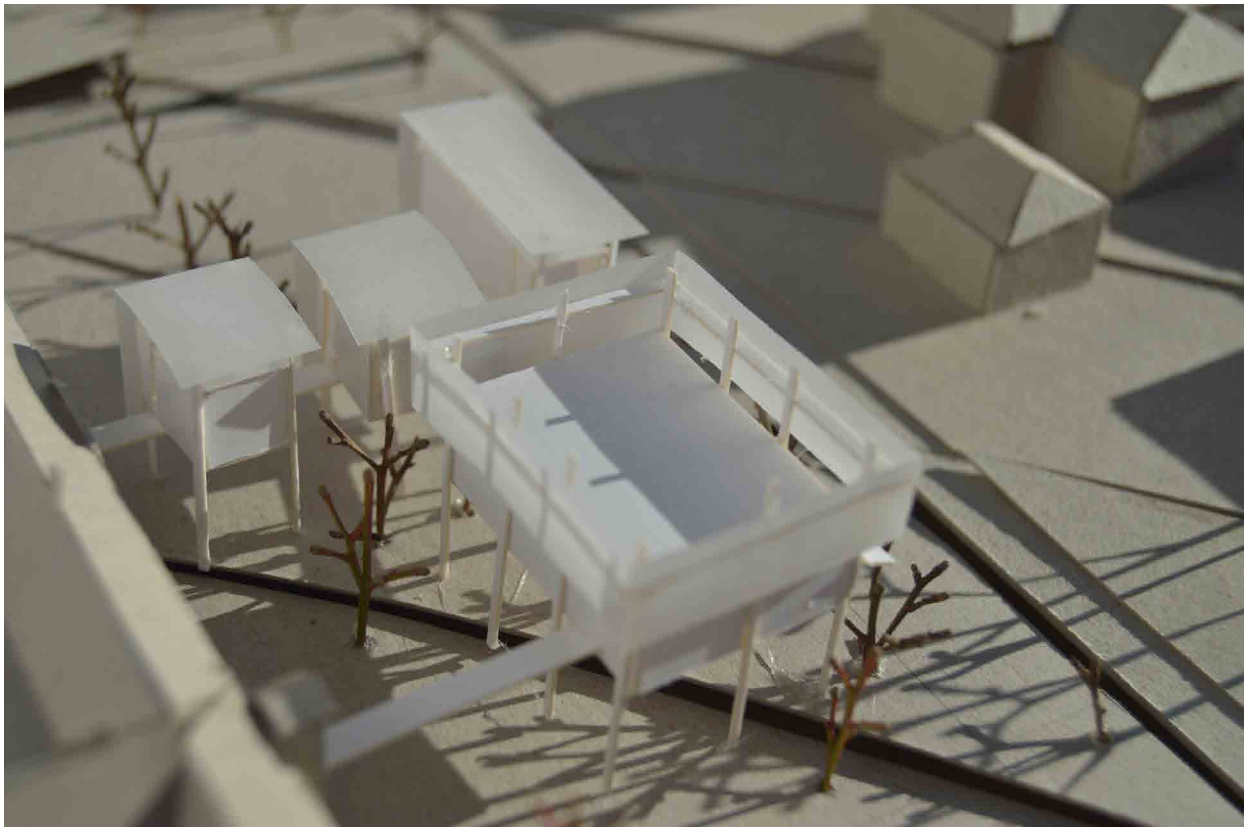
- A new model developed the phase 01 pavilions into more realistic architectural forms.
- Specific exhibitions are allocated to specific pavilions, determining their different sizes and position in sequence.
- To integrate the pavilions, an open walkway is introduced, following a very specific route.
- The main pavilion in the main courtyard starts to lower itself into the Old Government

Building, engaging with the heritage.

## Critical reflection:

- Elaborate route between the different pavilions will be too taxing for some visitors and not very practical.
- Despite containing different exhibition, the pavilions all still speak the same architectural language.
- Walls do not address climatic needs.
- Main pavilions imposes on heritage building, rather than celebrating it.
- The walkways do provide a connection to the heritage, but it does not really engage with it.







# The hovering future 2.0
(model 08 - 09)

## Approach:

- The phase 01 model is developed through two more models, introducing solid edges in the first model and structure to carry the new additions in the second model.
- To make the design site specific, a series of sketches explore how the curving walls might connect with the urban landmarks around the site, such as the Fourth Raadsaal, or the Fire Station Tower.
- A spatial layout is developed that places all the new functions in the new addition and the archive and office functions into the heritage building.
- A new entrance to the museum is introduced on the west façade, where the new form moves down and

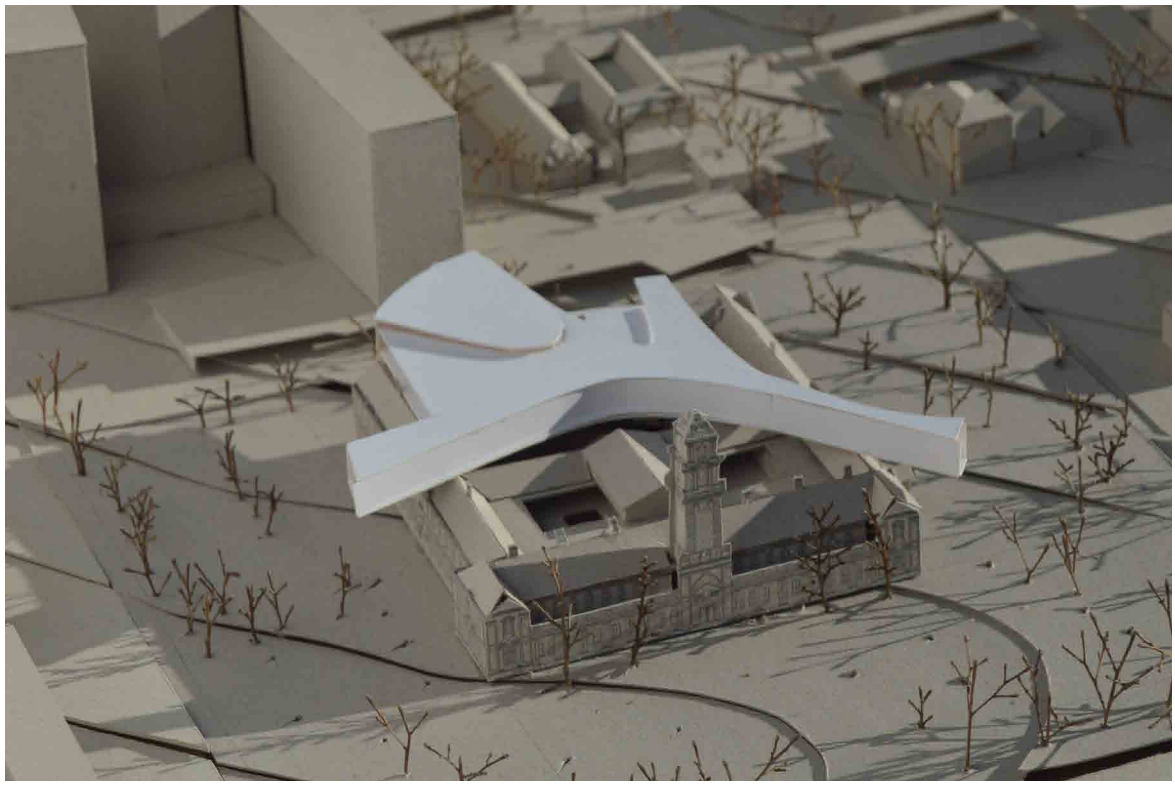
cuts through the heritage building.

## Critical Reflection:

- The transparency of the first model, softens the aggressive approach considerably, whereas the solidity of the models in phase 02 overpowers the heritage building.
- Having to incorporate structure adds to the density of the addition and it loses its gravity defying appeal.
- This approach was appealing as a bold investigation into challenging conventional thoughts on heritage, but this design does not appreciate or celebrate the existing, which is the ultimate aim of this intervention.









3.1.3

# Phase 03

re-evaluation of the place

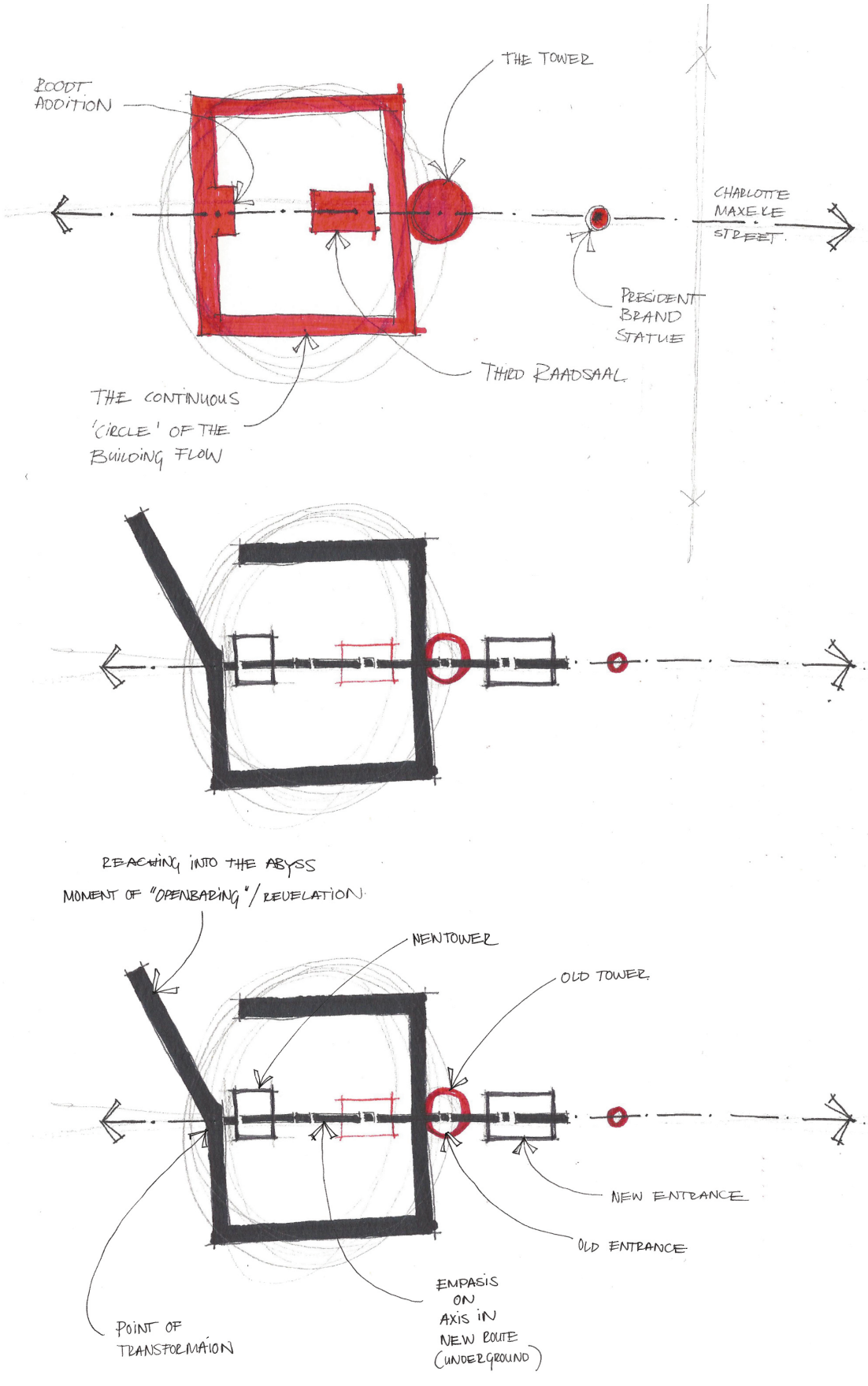
Reflecting on the overall design progress up to phase 03, it becomes clear that there should be a re-evaluation of the heritage building and site itself. This is why none of the design approaches up to this point has been entirely convincing, although each had its merits as an exploration of a possible approach. The theoretical discourse highlights the importance of listening to the voice of the place before breaking the silence with a new design proposal. To ensure that the approach that is chosen is the most appropriate, a closer look at the Old Government Building itself is taken.

## From the parti diagram the following important aspects of the heritage building is identified:

- The urban axis that connects the tower with Charlotte Maxeke Street and the train station is a very important aspect of the building, currently and historically. This axis should therefore be highlighted and celebrated in the new design proposal.
- The tower along this axis is part of a historically significant vista when you look up Charlotte Maxeke Street at the Old Government Building. The impact of this tower on the historic vista down Charlotte Maxeke Street has been diluted by the O.R. Tambo building on the west. This vista should be restored.
- The tower is the most iconic feature of the building. Along with the east facade, it is the public face of the Heritage Building and should be engaged with. Towers are also a part of the urban landscape's language.
- The east side of the public gardens lacks engagement with the public, especially since the trees in the historic tree garden have either been cut down or are dying. This is an important public space and should be redesigned to gather the public closer to the heritage building and to challenge perceptions of the tower.
- The east façade is the most culturally significant side of the building and should be respected the most. The other facades are also important, but less than the east façade. If the new additions are going to challenge the heritage building, it should therefore happen on these facades. The west façade is the least impactful, since it is already overpowered by the neighbouring O.R. Tambo Building.
- True appreciation and engagement with the heritage building means the public should be brought into the heritage building itself.
- The nature of the existing circulation in the heritage building is circular, something the new design can incorporate.

## Resulting design decisions based on the re-evaluation:

- A new tower is placed in the main courtyard, replacing the Roodt addition. This tower has a dual function. On the east elevation, it creates a blank canvas behind the Old Government Building tower, restoring the historic vista. On the north and south elevations, however, it challenges the hierarchy of the Old Government Building tower. It also becomes an anchoring point for the new contemporary literature wing on the west elevation.
- The new contemporary literature wing is located on top of the west wing.
- A new underground route is created along the east-west axis. On this route, under the Third Raadsaal, is a new exhibition space specifically focused on the untold history of Afrikaans.
- the archive should be moved to new, purpose-built facilities underground and the heritage building used for exhibition space.


ROODT ADDITION
THE TOWER
CHARLOTTE MAXEKE STREET
PRESIDENT BRAND STATUE
THIRD RAADSAAL
THE CONTINUOUS 'CIRCLE' OF THE BUILDING FLOW
REACHING INTO THE ABYSS
MOMENT OF "OPENBARING"/REVELATION
NEW TOWER
OLD TOWER
NEW ENTRANCE
OLD ENTRANCE
EMPASIS ON AXIS IN NEW ROUTE (UNDERGROUND)
POINT OF TRANSFORMATION

3.1.4

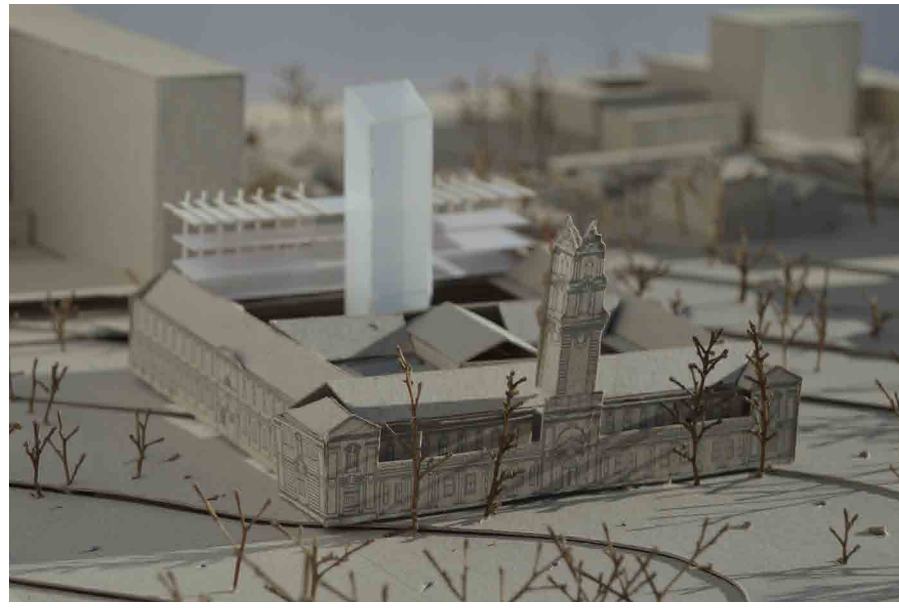
# Phase 04

exploration after the re-evaluation

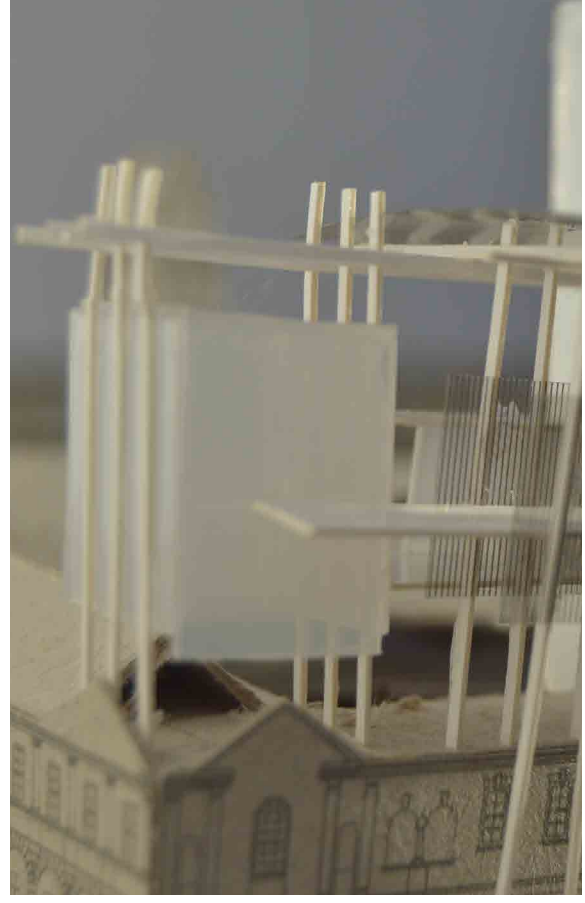
Phase 04 of the design process involves exploration of the form-giving of the new west tower and contemporary literature wing. This included a further set of six 1:500 models, each of which explore the possible morphologies and connections to the heritage building. These models are show in sequence, with model 06 becoming the approach that is developed further in the next design phase.

## Model 10

The new wing is stacked on top of the heritage western wing.
A second skin on the western side provides climatic control - it covers half of heritage façade.
The structure of the new skin picks up the rhythm of heritage façade.

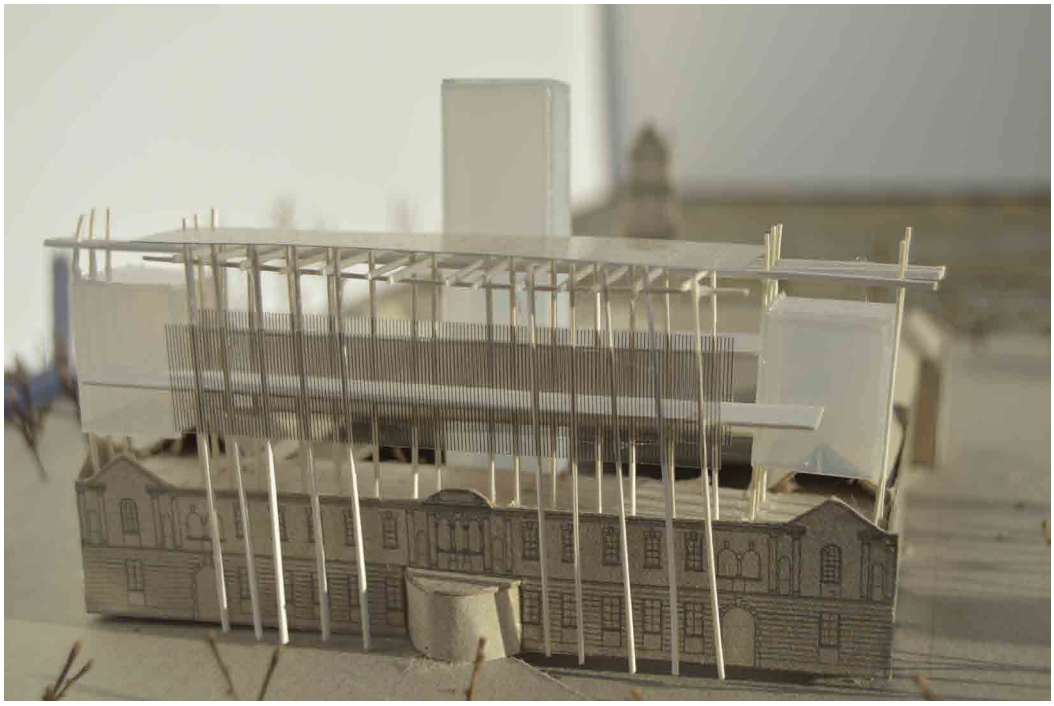






## Model 11

Light boxes grow out of the corners with the new wing suspended in-between.
A secondary skin on west provide climatic control and the pause space threshold.
The structure of the new picks up on rhythm of the heritage façade.



## Model 12

New wings on top of half of the north and south wings.
Outside space on west wing connection.
The structure of new keeps to the rhythm of the heritage facades.
The tower becomes lighter towards the top.

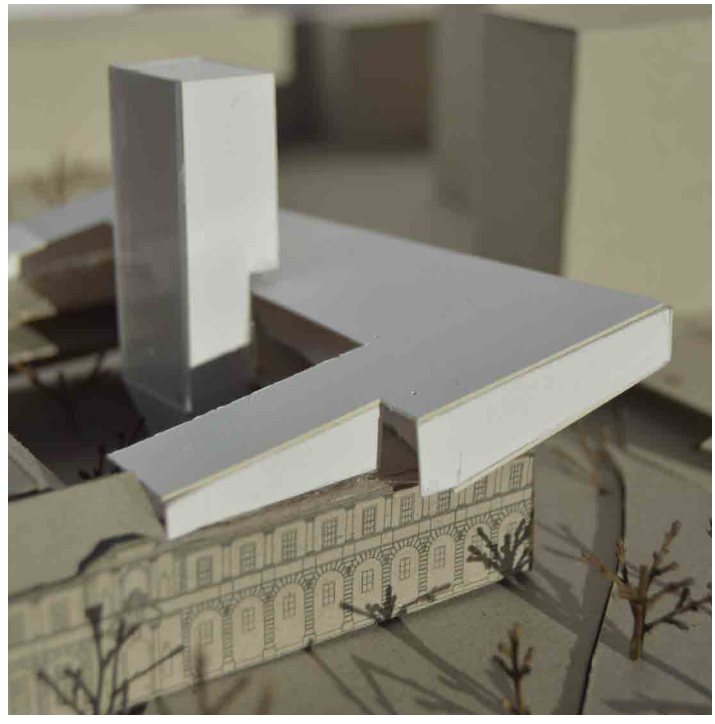


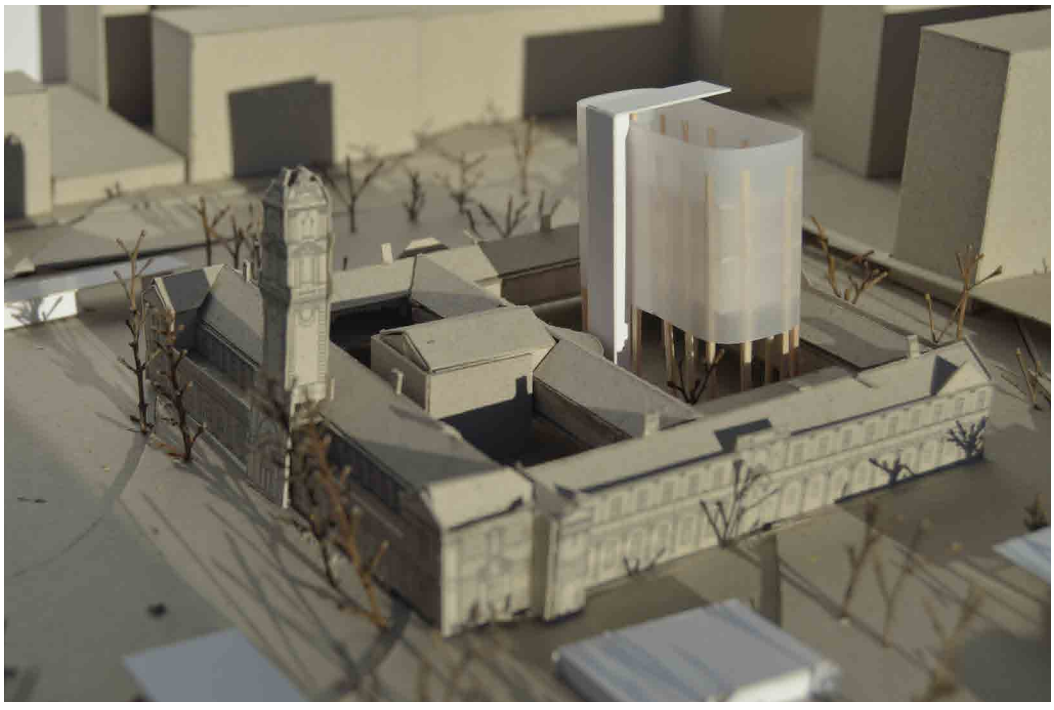




## Model 13

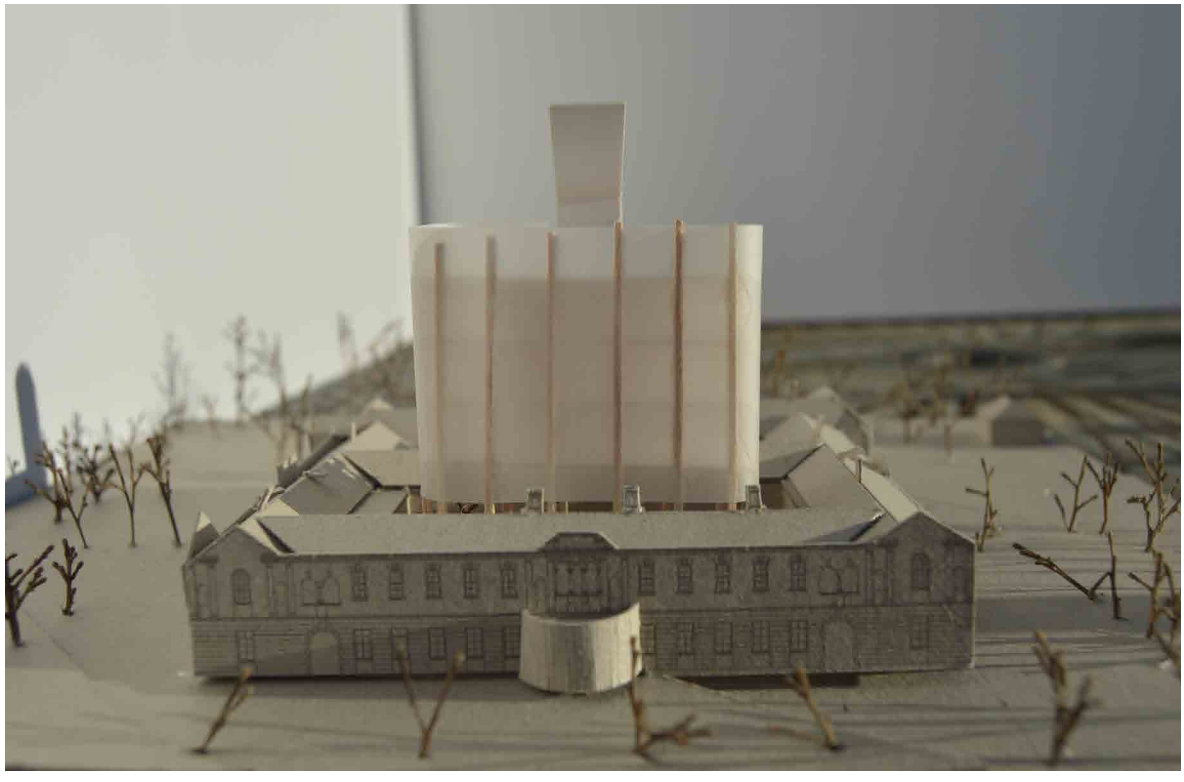
New wing grows out of the existing, flowing out of the existing circulation pattern.
The north-east corner of the new lifts over the gable, breaking the strict regularity of the facades, creating a subtle angle on elevation
contemporary literature breaking away from the old way of writing, listening and speaking.
The tower is solid, referencing the Old Government building and the northern wing of the O.R. Tambo building.





## Model 14

Merging of the new contemporary literature exhibition wing and tower into the box over the Main Courtyard.
A new underground route with pavilions popping out over ground in various places on the site.



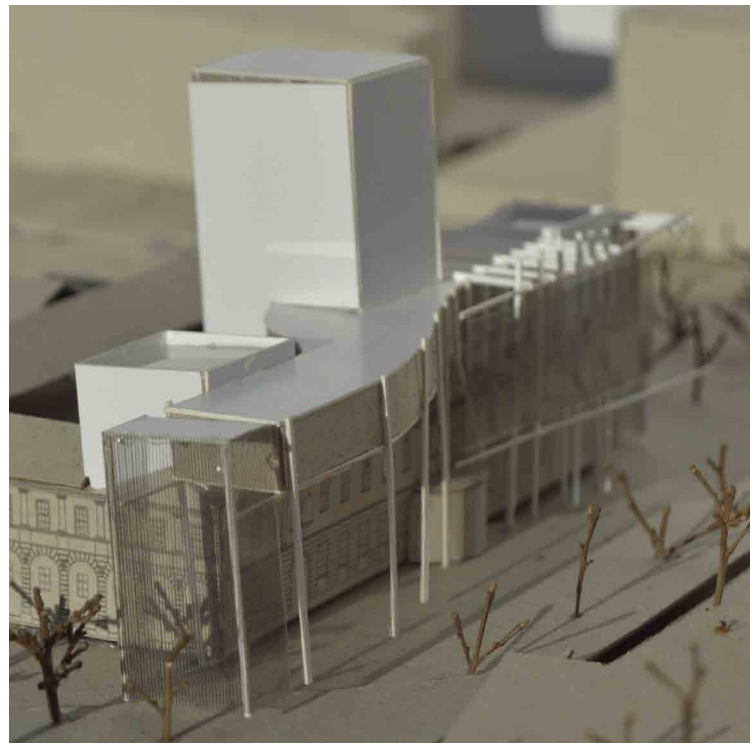
# Model 15

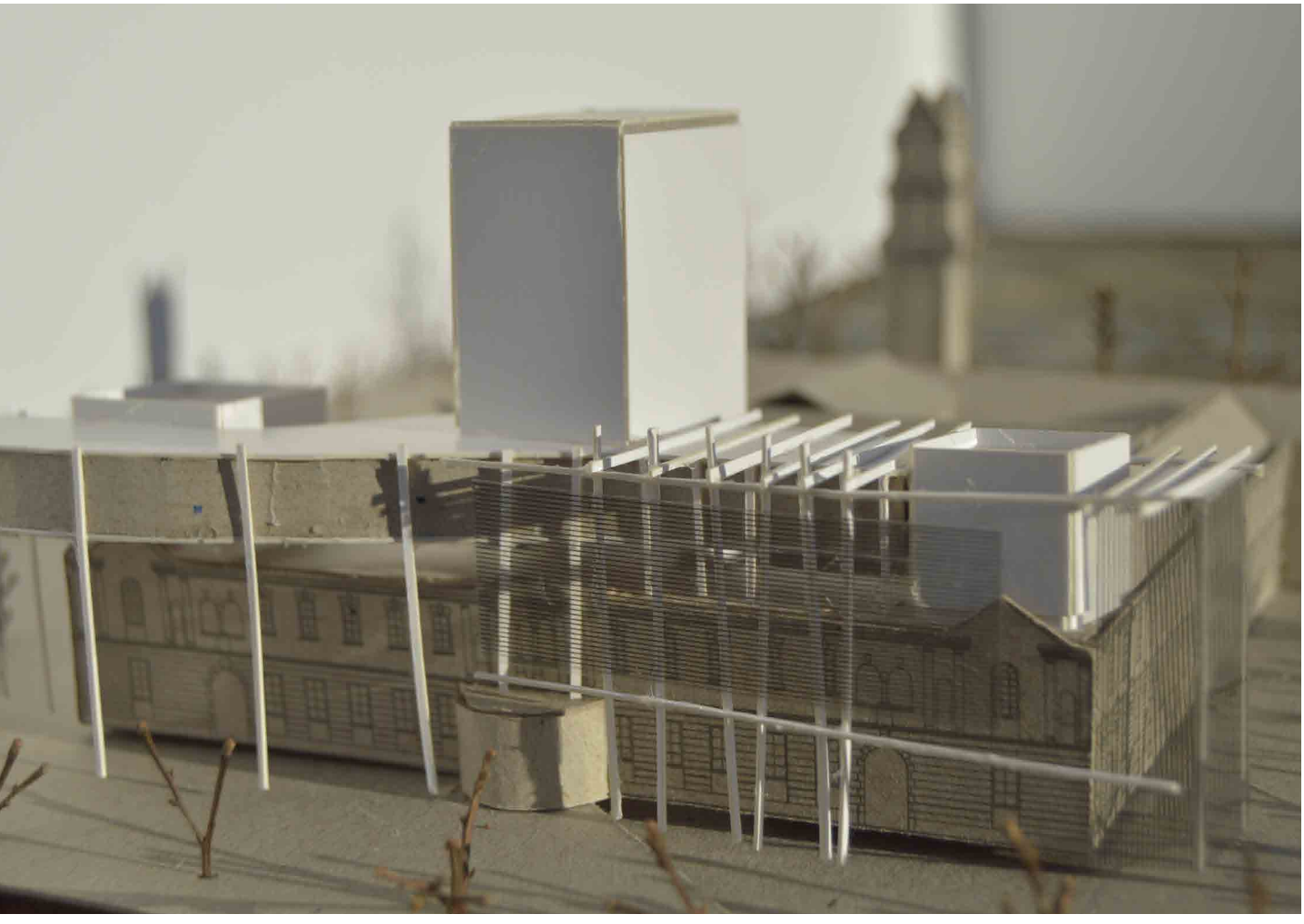
Developing model 14 by moving back to a just a tower, but still an underground route with over ground pavilions.
A new contemporary literature exhibition is accommodated in one of the pavilions in the garden.



# Model 16

Further development of model 11.
The new wing challenges the strict order of the west façade as it moves to the north, breaking free from its rigidity.
The new wing extends beyond the light boxes.
The light boxes are planted solidly into heritage building corners.

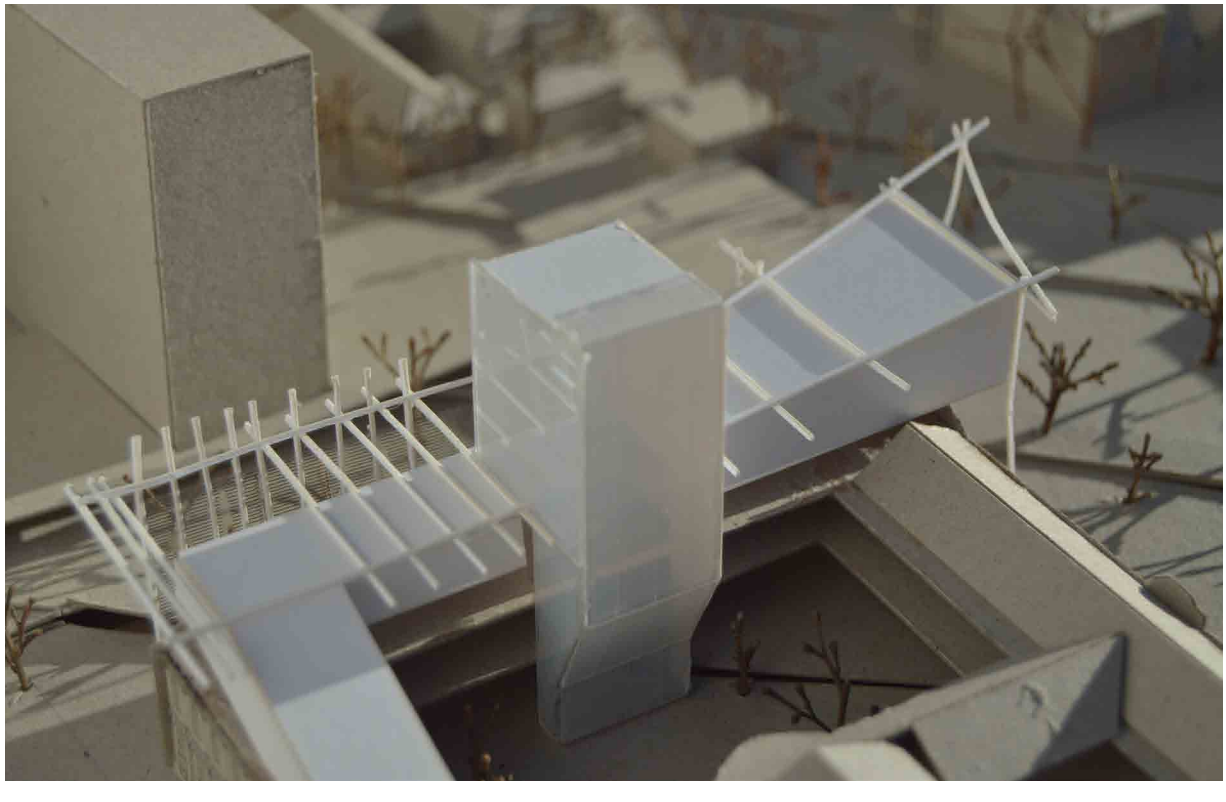






## Model 17

A combination of 13,15 and 16 is used.
There are no more corner light boxes.
Like 04, the new wing grows out of the heritage building roof, but now it continues beyond the north-west corner like the wing in 05.
The structure with changing rhythm of 05 remains.
There is a slow rising of the wing to the north, moving over the gable, with a subtle angle on the west elevation.
The underground route remains, but the over ground pavilions are left out.



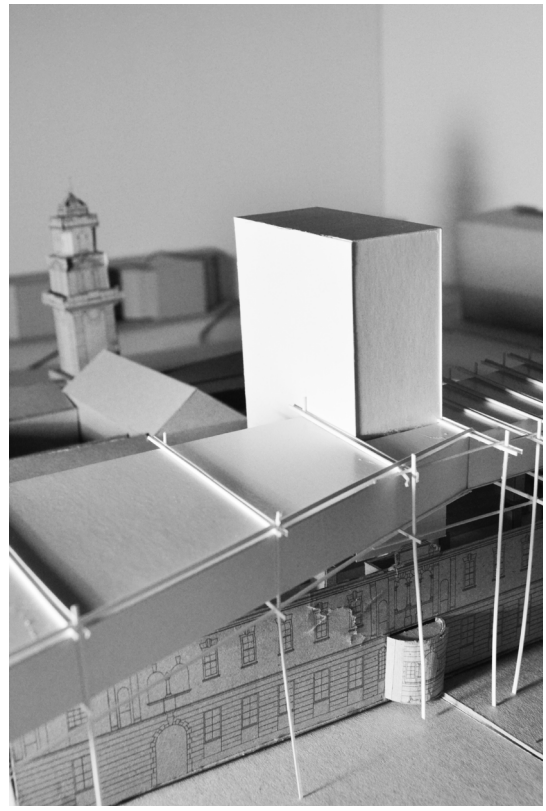
3.1.5

# Phase 05

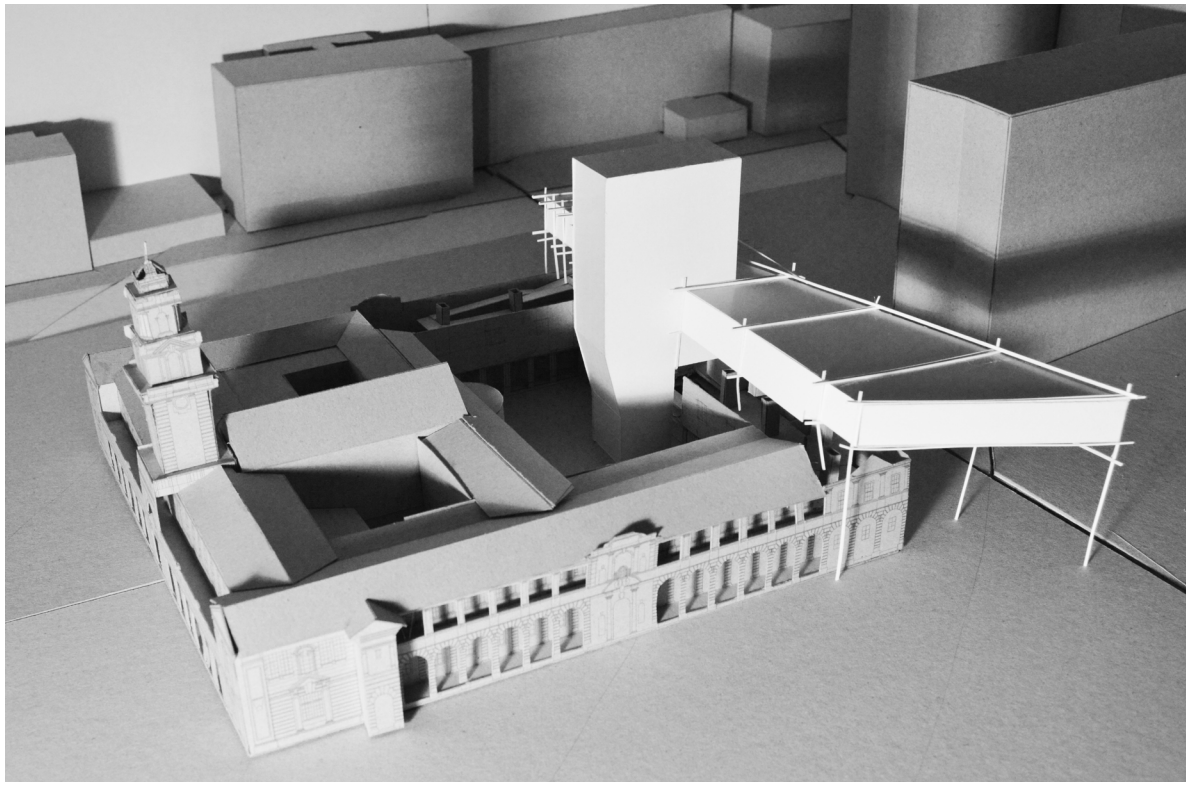
refining the approach

This phase is focused on developing the form-giving of the new wing addition, as wells as working on the spatial planning of the museum, archive and other functions.

Model 18 is a 1:200 model version of model 17. Critical reflection of this model reveals that the new contemporary wing should be more dynamic, play with level changes and become more dramatic towards the northern point.

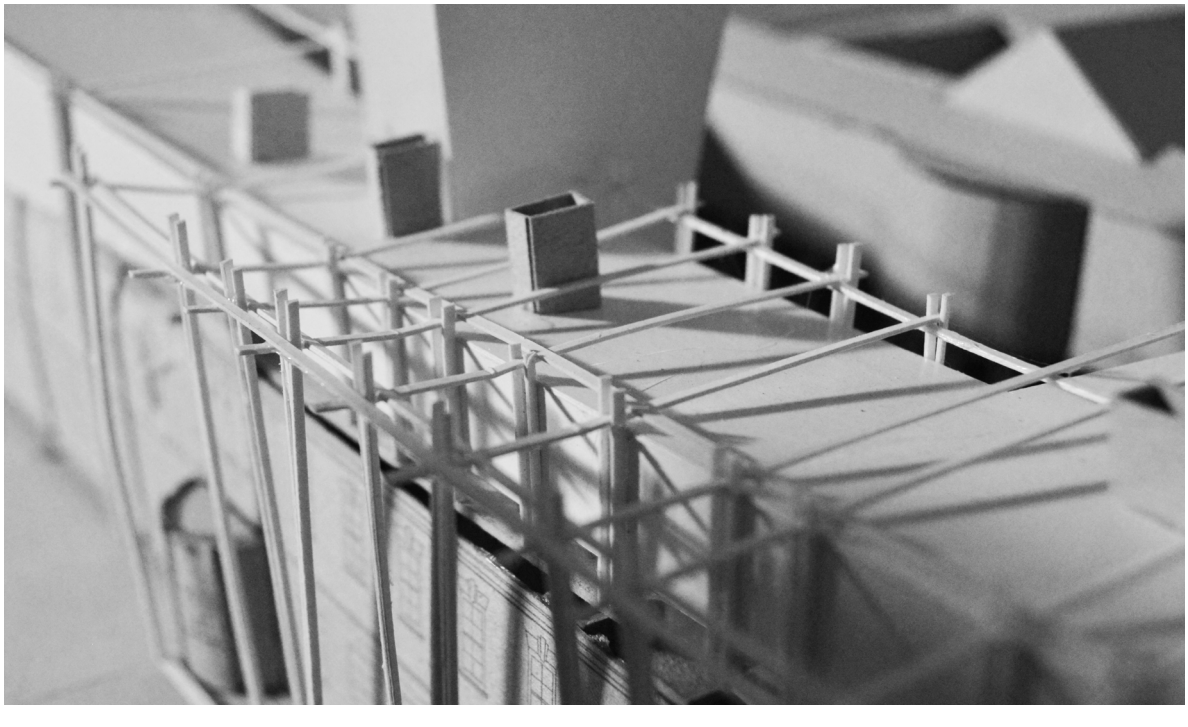


## Model 18

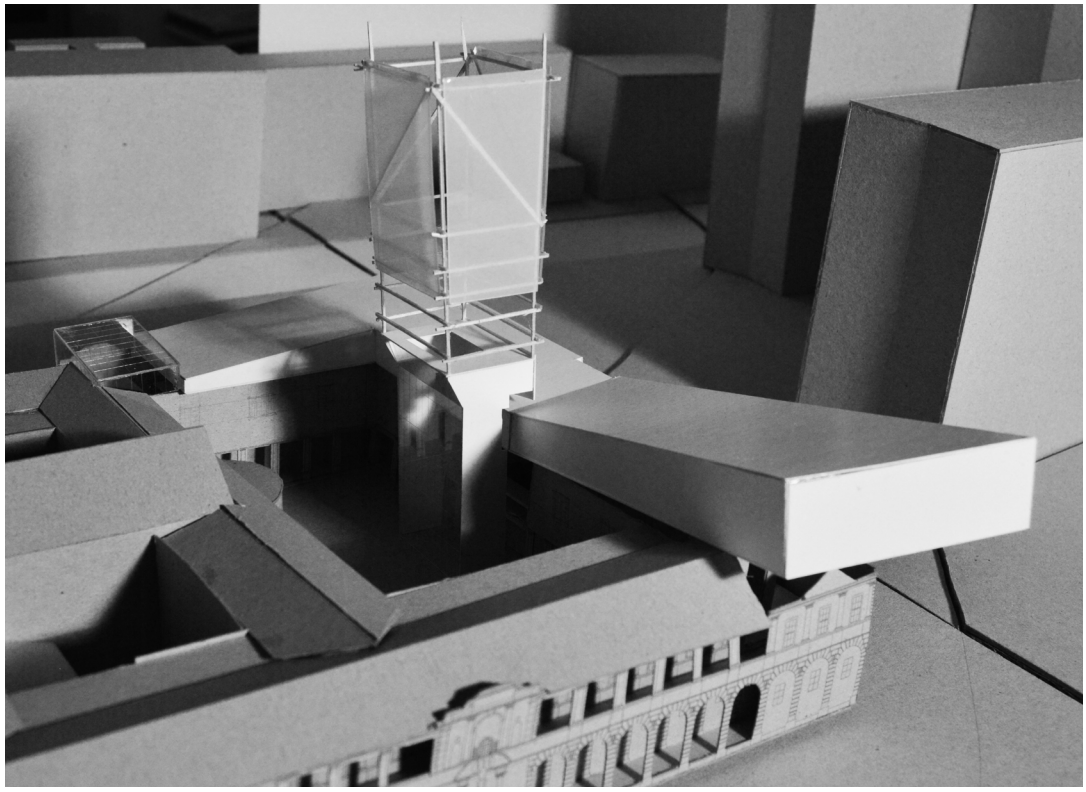


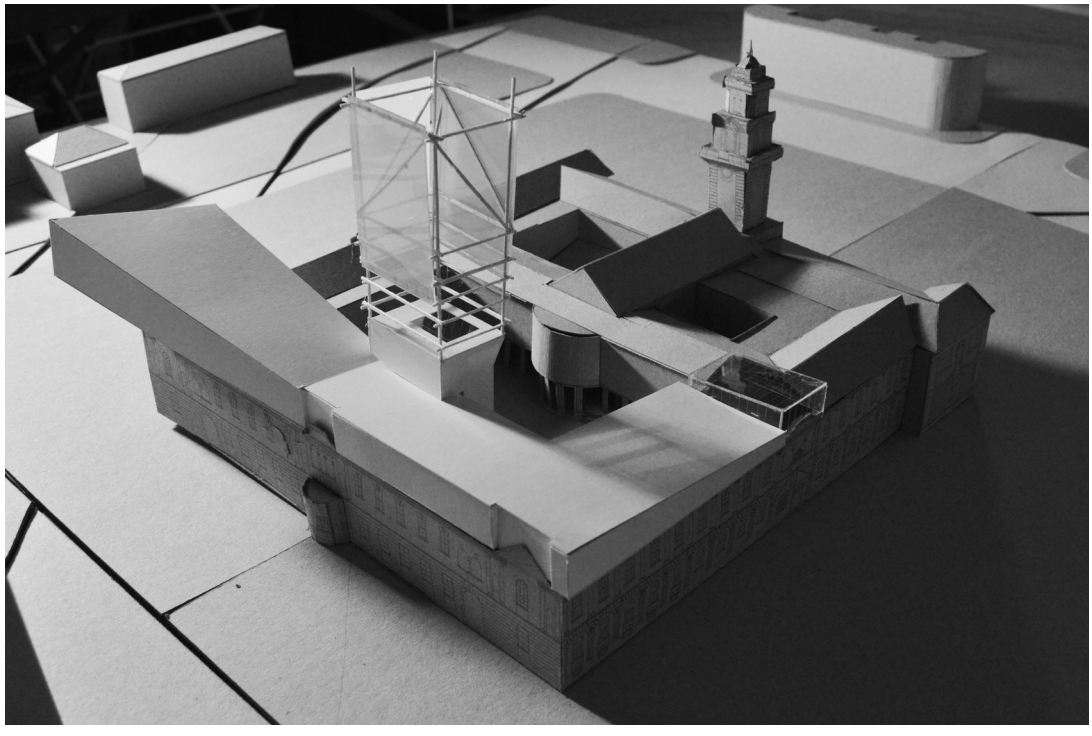
# Model 19



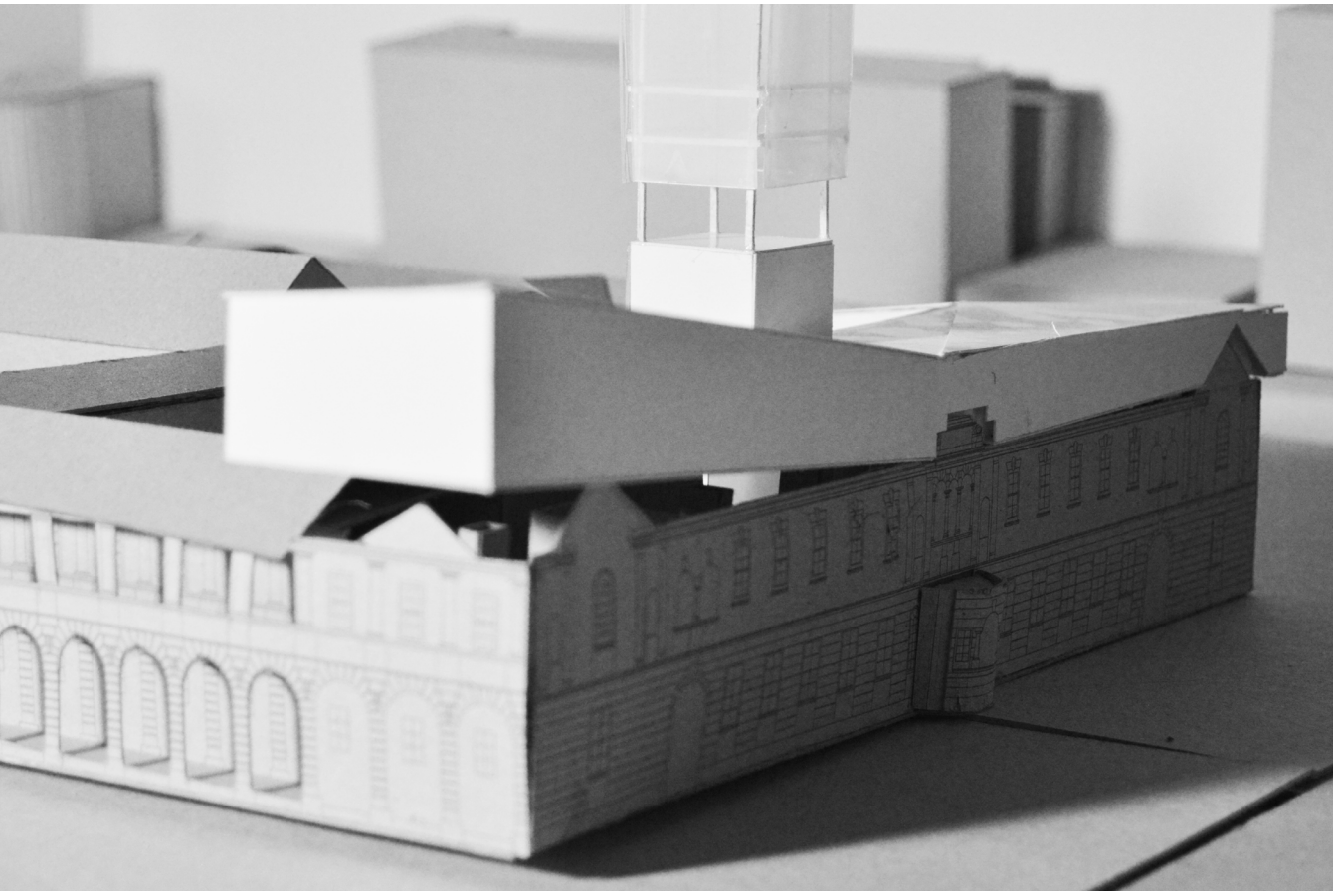


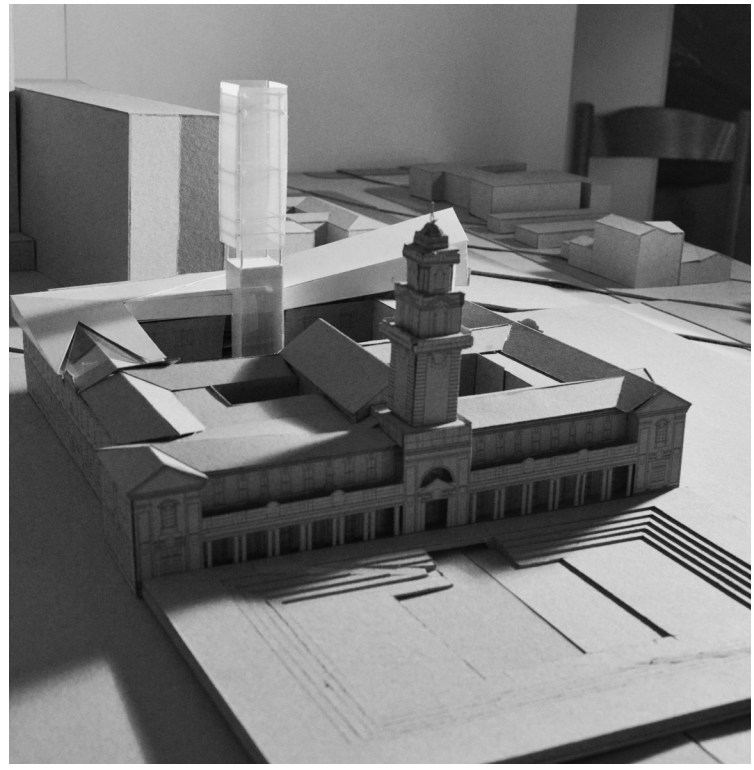
# Model 20



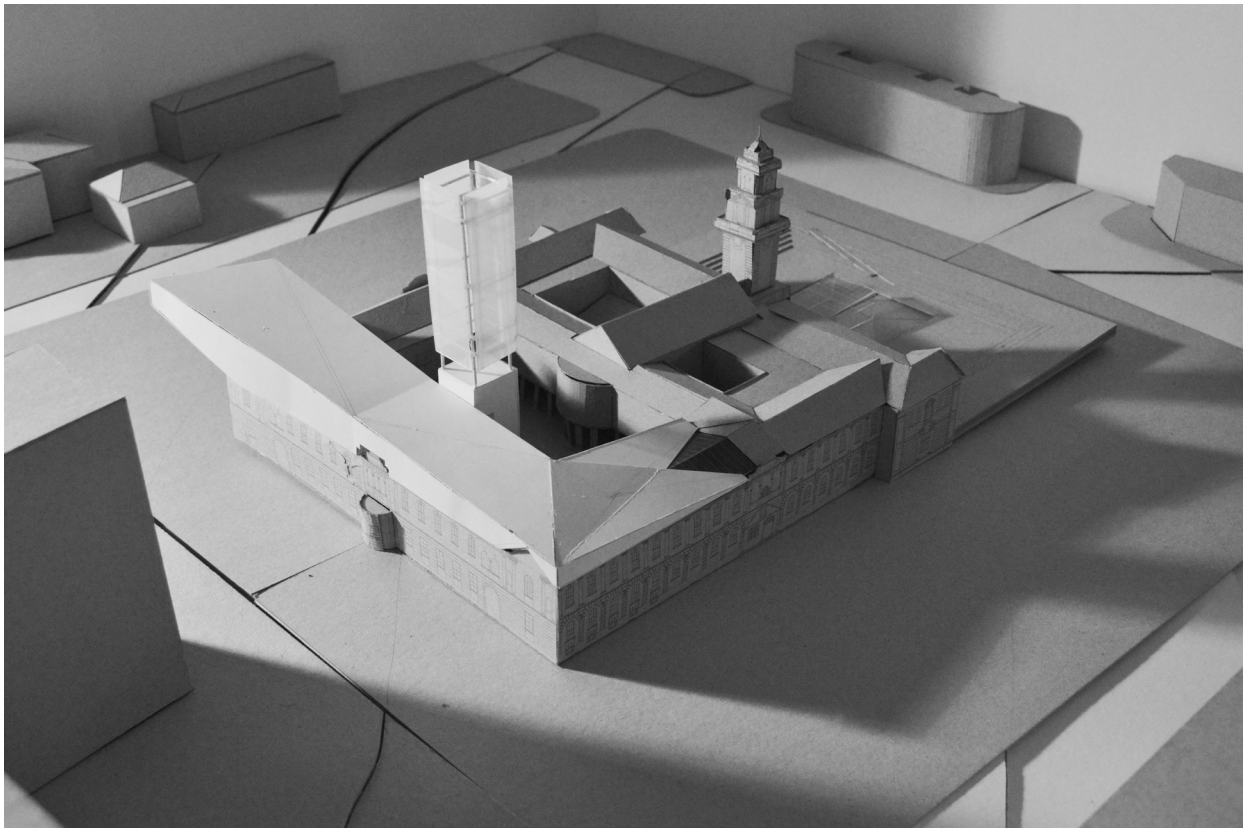


# Model 21

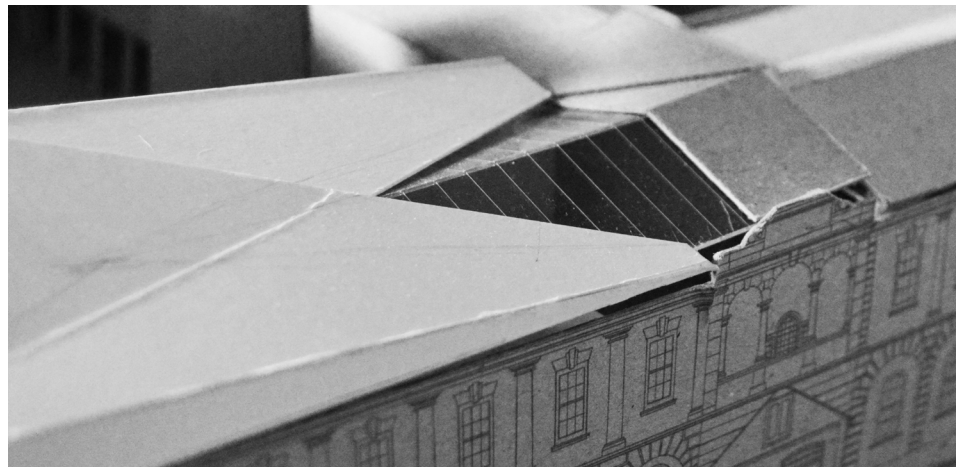




# 3.2 Towards a final design



Preliminary design model



Connection between old and new roof - a moment of silence in glass

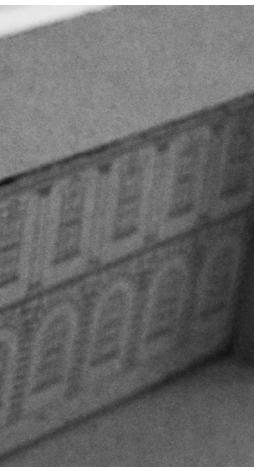
The moment of rev



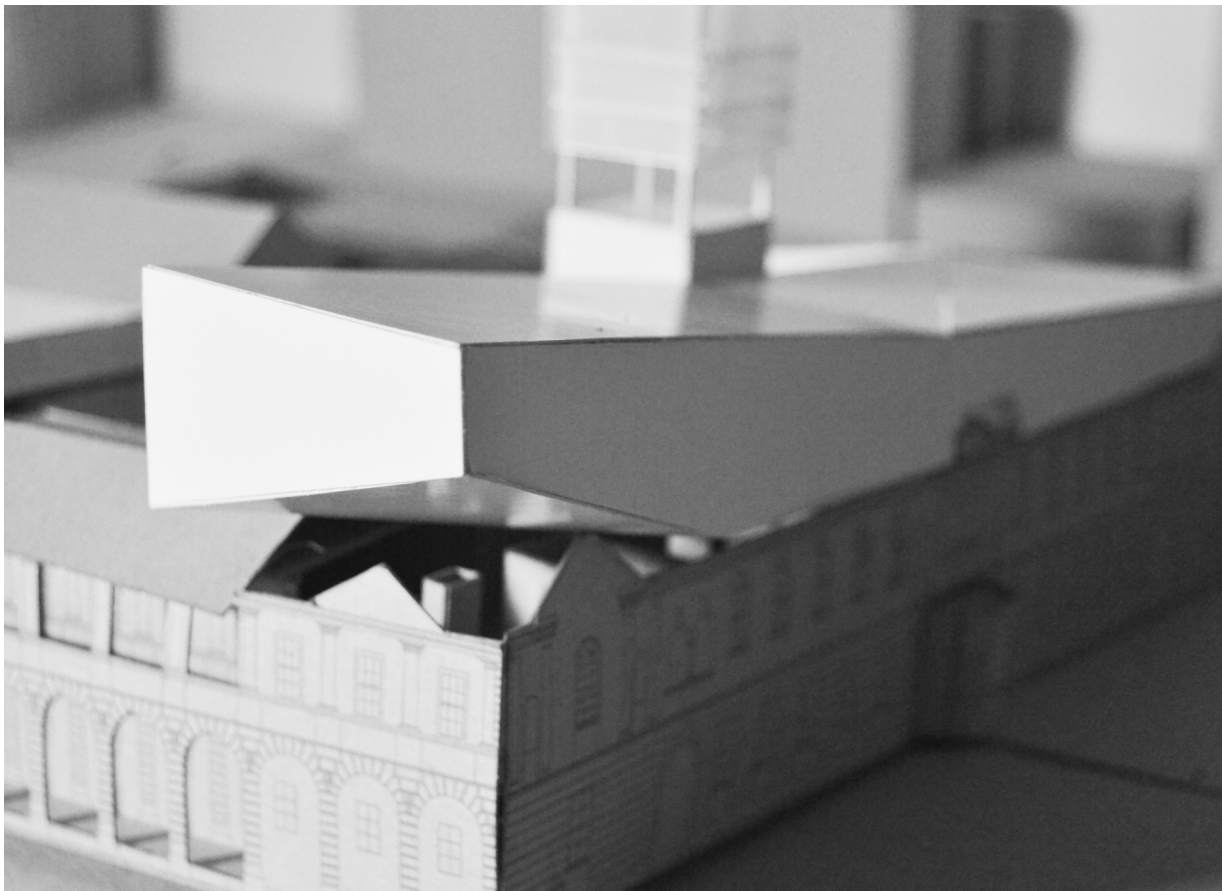
Old Government Building Tower and new underground entrance

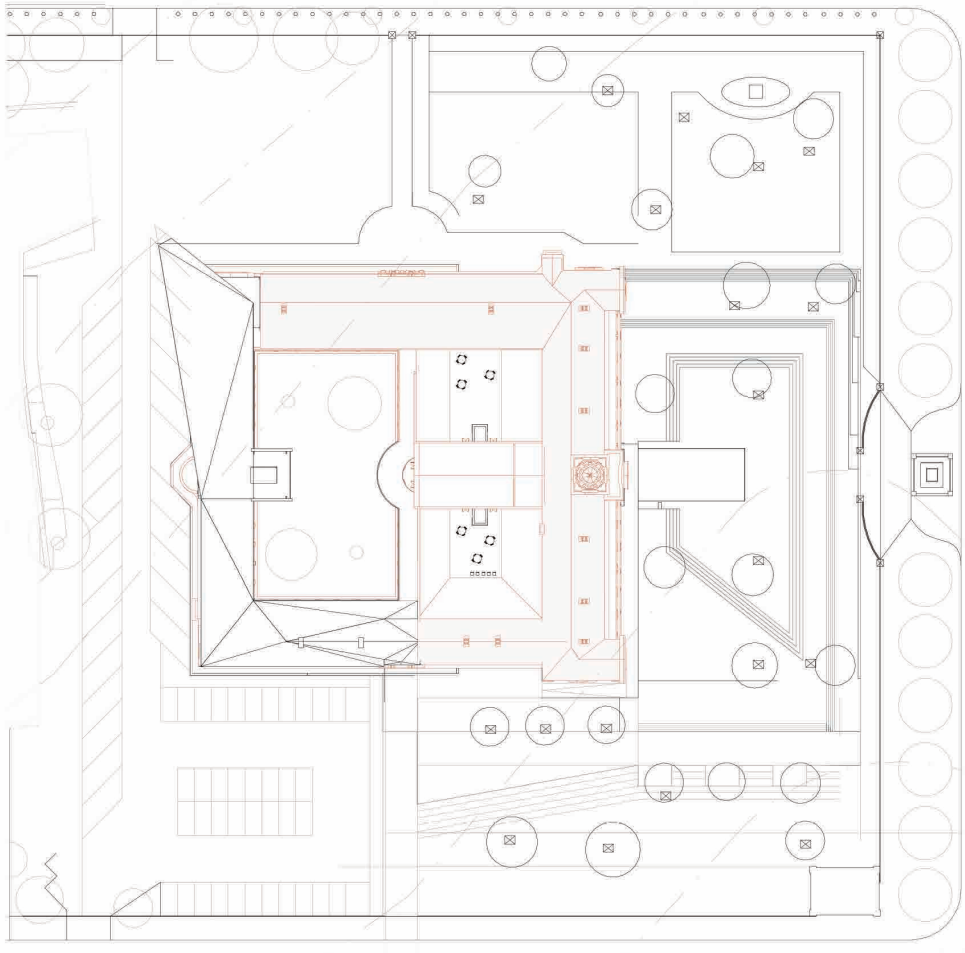
New wing gives way for historic gable



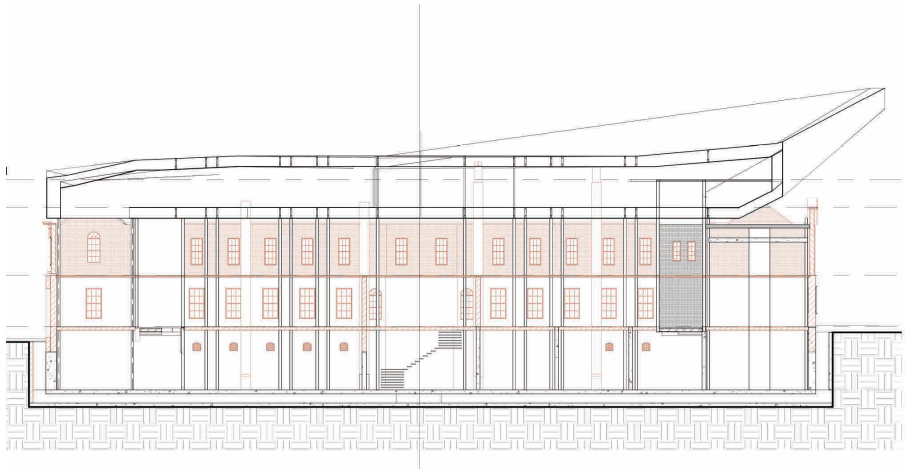


elation lifting up above the northern gables

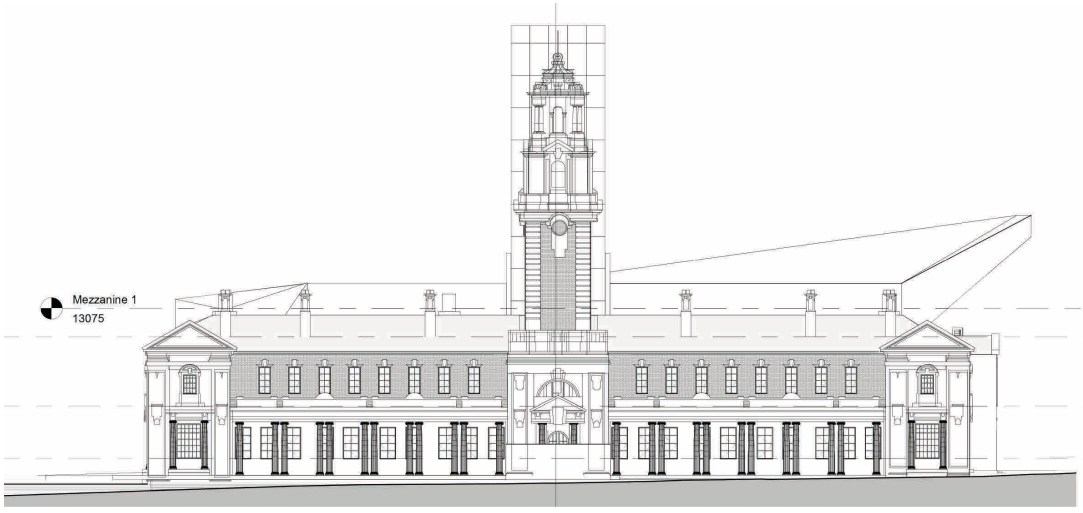




Site plan



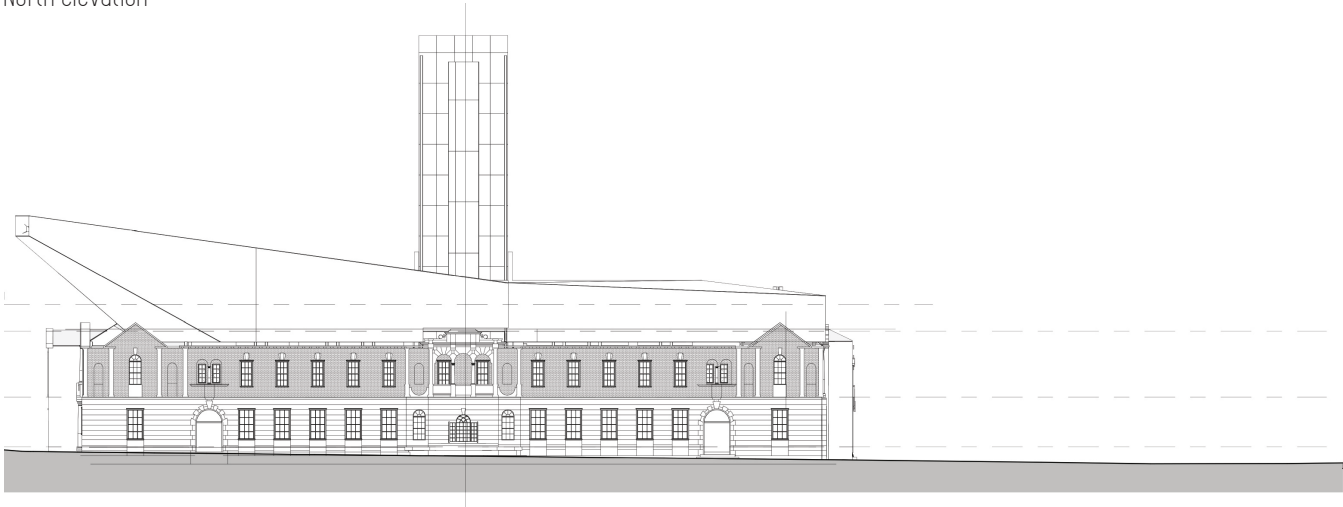
Section 1



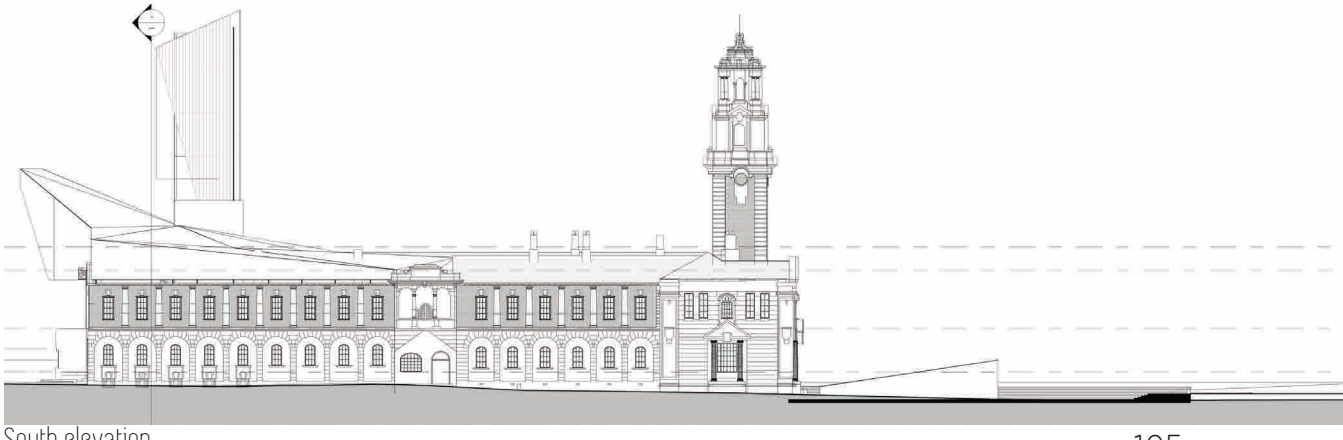

East elevation



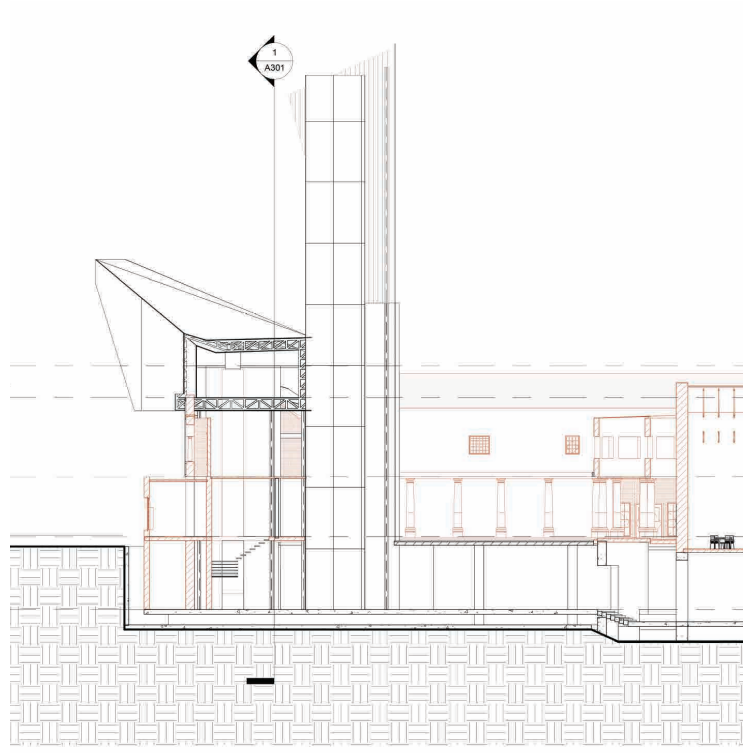
North elevation



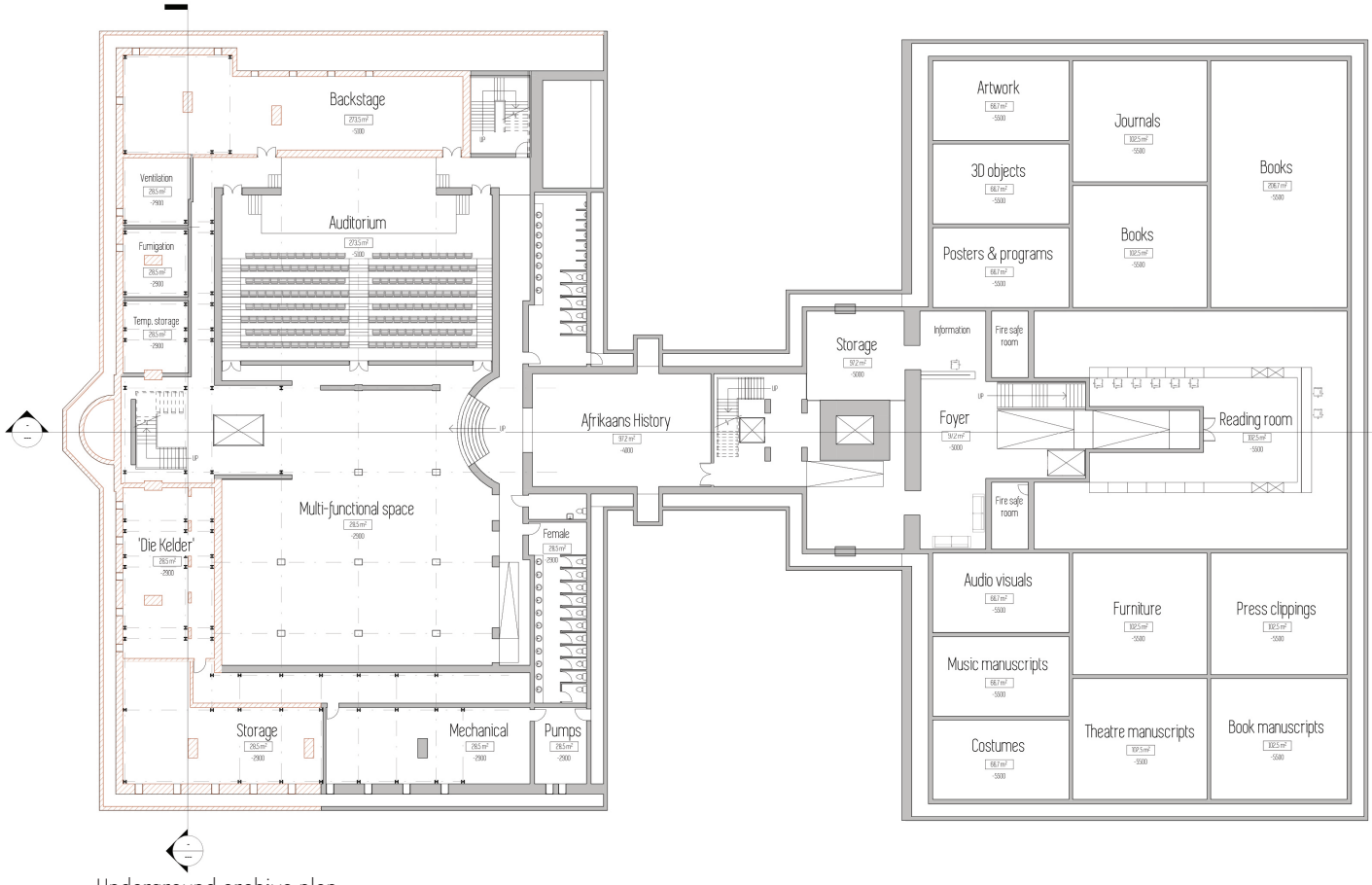
West elevation



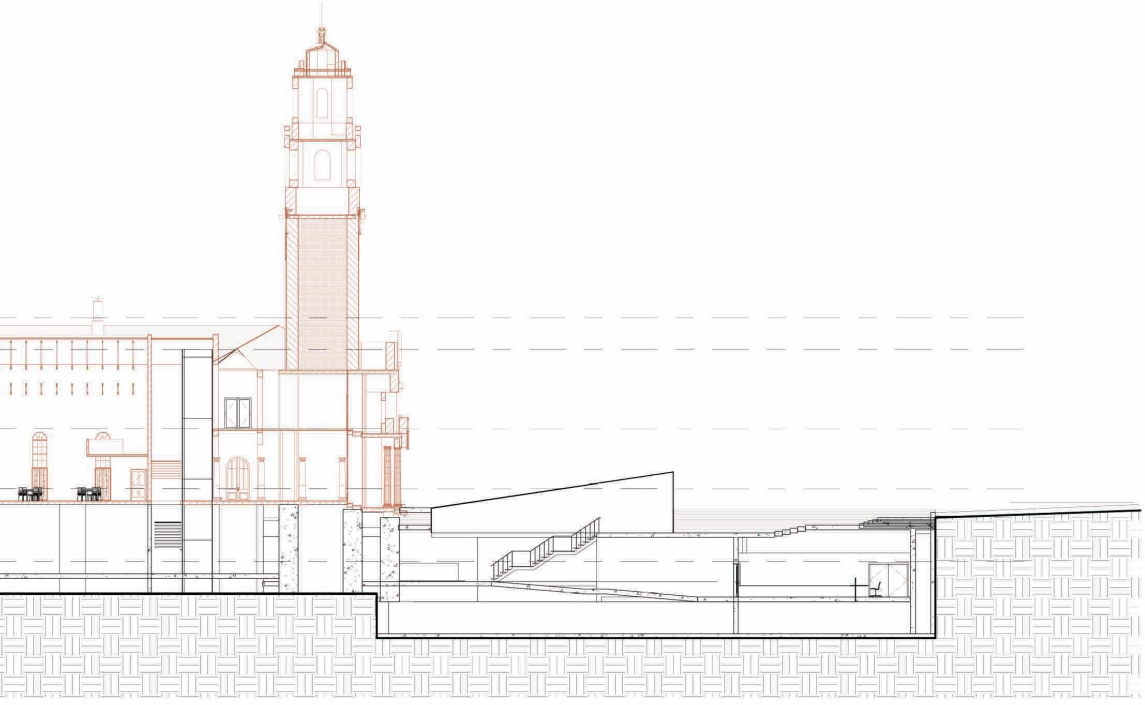
South elevation

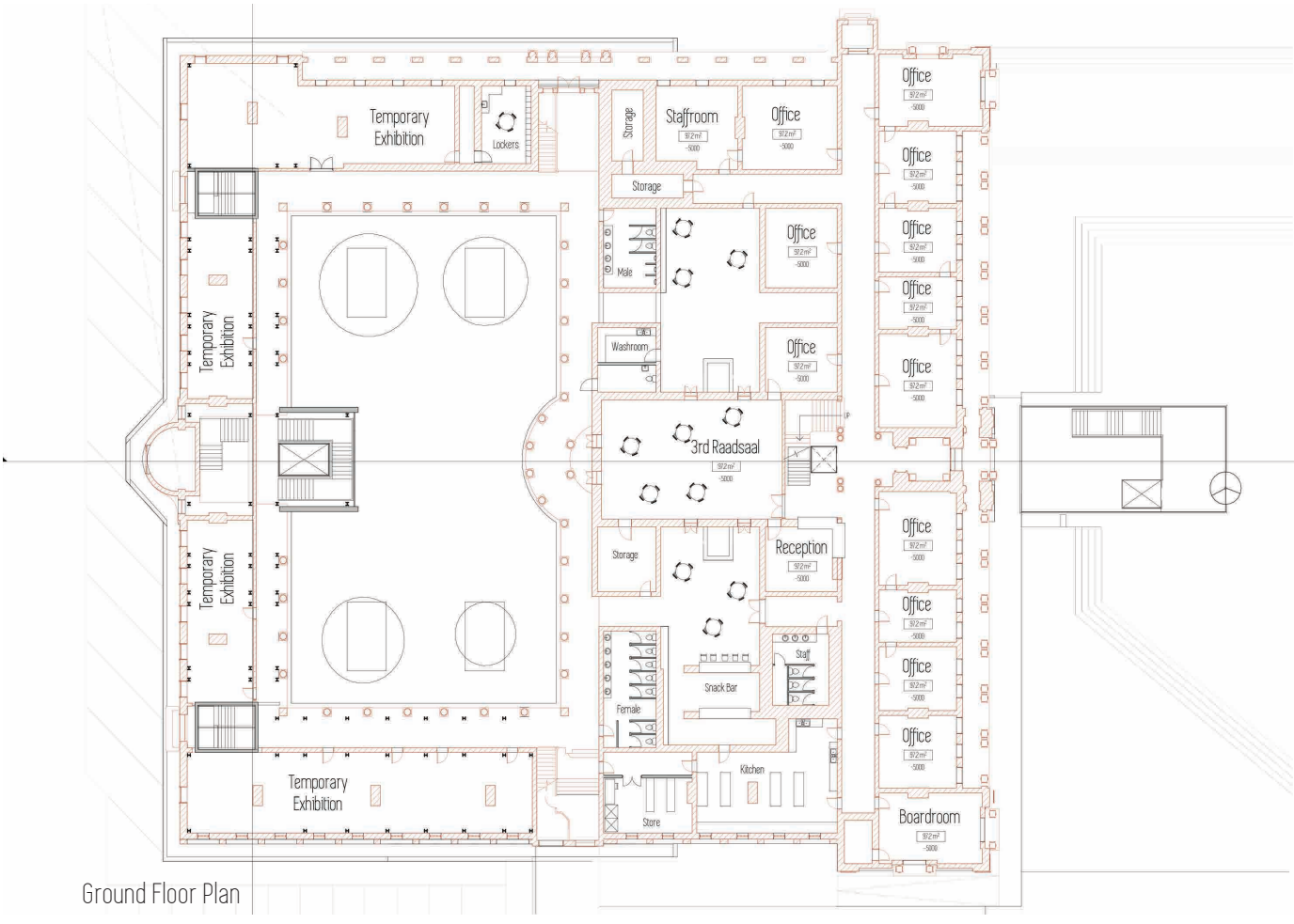



Section 2



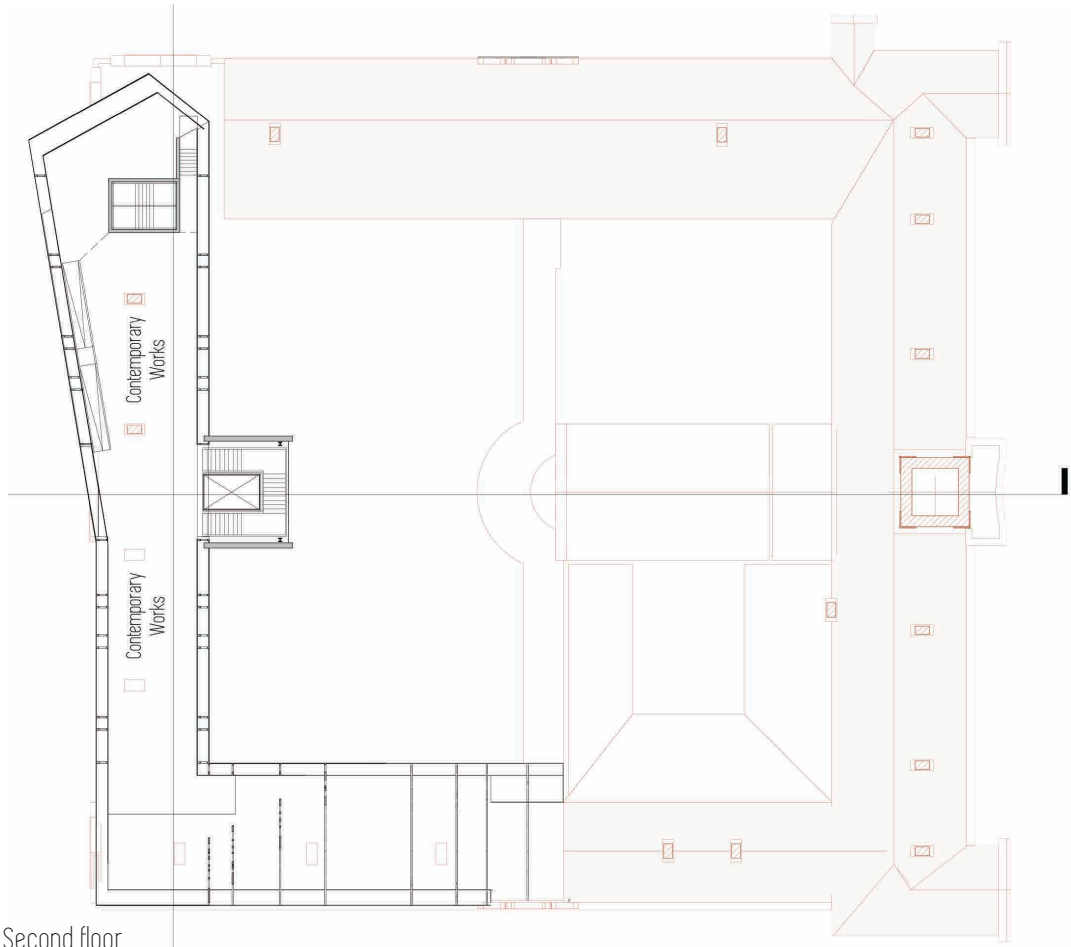

Underground archive plan



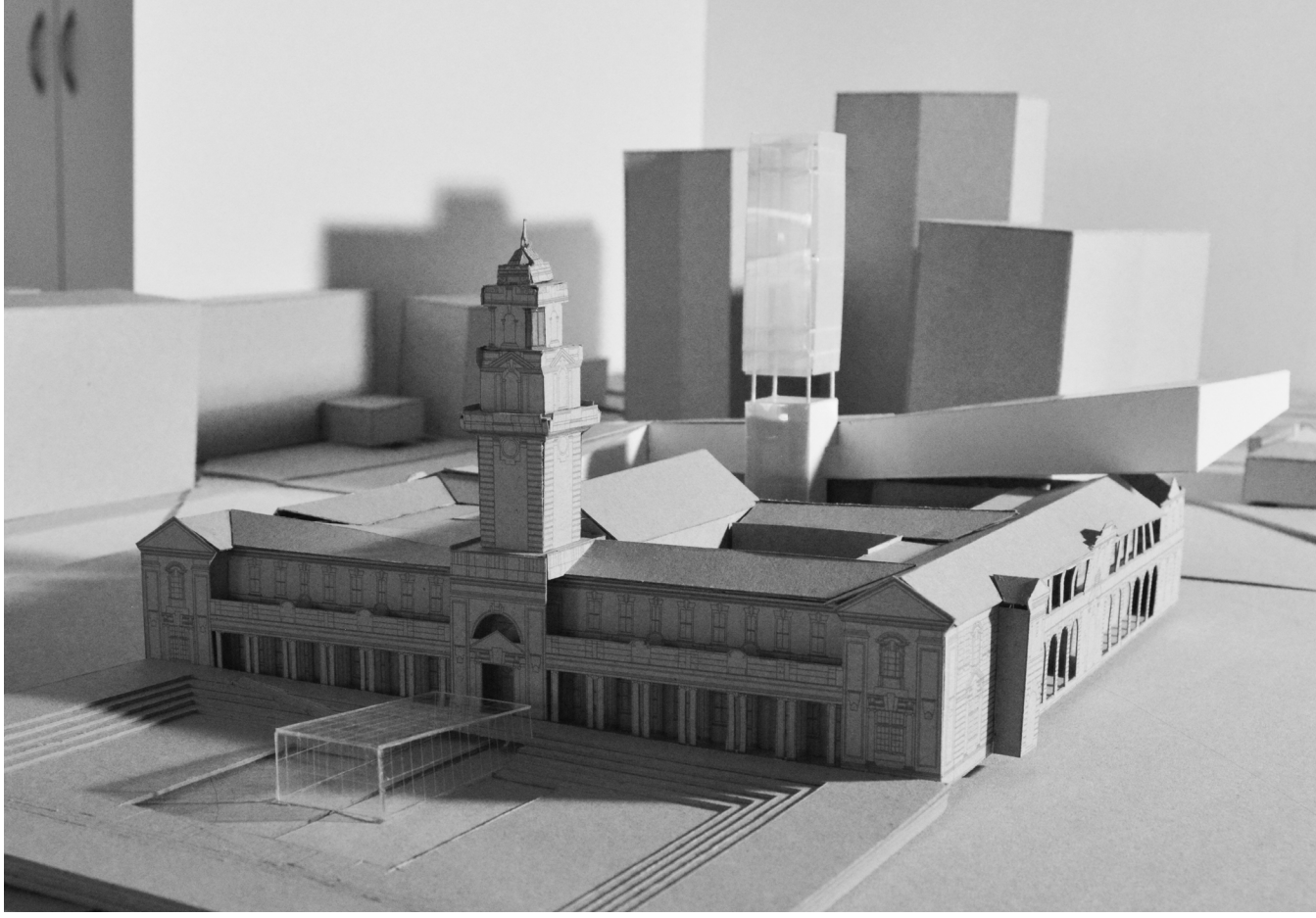


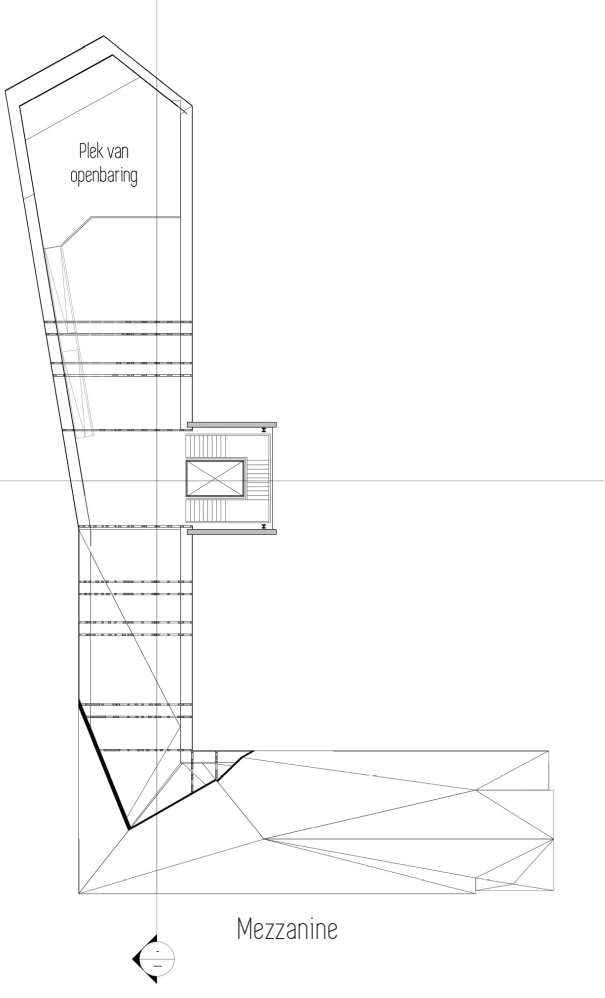

Ground Floor Plan






Second floor






Mezzanine

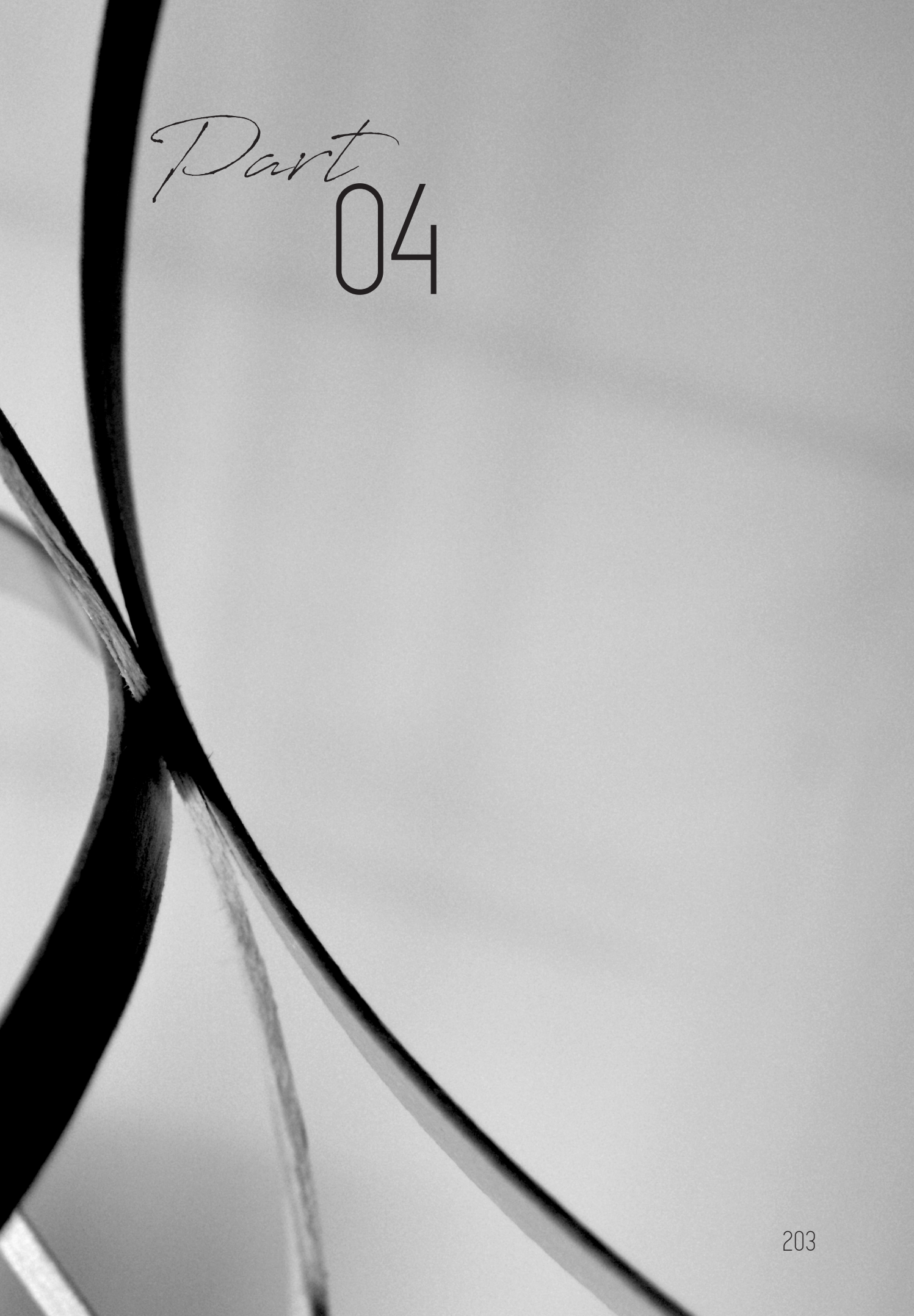
# 3.3 Technical resolution

appendix B

# 3.4 Plagiarism report

appendix C





# Part 04

# 4.1 Reflection

The following is a personal reflection on the processes explained in this document. Set-out in a timeline, it describes my personal experience of the development of this dissertation.

**January 2018**

After investigating a few possible topics for the dissertation, I stumble upon the intriguing phenomena that is NALN and the Old Government Building. I fall in love with the place and architecture and am convinced that this is the challenge I want to pursue for the rest of the year. During the proposal to my supervisors, it is agreed that this could be a very interesting investigation process, but that it could also be controversial, since there are many different opinions on the approach that should be taken where heritage buildings are concerned. Never the less, I decide to continue, believing that there is more value in pushing myself to answer a difficult question than perhaps choosing a 'safer' topic.

**February 2018**

The themes of heritage and language are clearly the core aspects of the dissertation. However, these are broad terms and boundaries need to be set to make sure the project remains focused. The touchstone and four conceptual models are valuable opportunities to play around with a few ideas, but these could still be interpreted into a variety of architectural responses.

**April 2018**

At this point, the first external review takes place. By this time, the project has gone through extensive exploration (nine 1:500 models experimenting with architectural forms). Not fully convinced of any of the possibilities, I propose three possible interventions. From the review feedback, I realizes that I got lost in the thrill of experimenting with conceptual ideas and forms. Thus, I decide to go back to the voice of the place and listen anew to what the project wants to be. Deciding to re-define the project for myself, I establish that I am looking for a balance between respecting the heritage and creating something contemporary and innovative.

**June 2018**

Having established that the tower and axis are part of the essence of the heritage building, I now have gained a clear perspective of where I want to take the project. Development of the contemporary literature wing becomes an interesting exploration of architectural form that extends out of the heritage buildings. During this time, I also start to engage with literature as a part of the theoretical discourse. The external review highlights that the proposed design is still incorporating previous design decision that are no longer relevant and should be reconsidered.

July-August 2018

Working on a larger scale, the form-giving of the contemporary literature wing is sculpted and refined. Attention is given to the structural system of the form. The connection between the new wing and the heritage building's roof also became a challenging aspect of the design. The overall layout of the functions within the heritage building and the new additions is refined to make sure the conceptual approach translates to a functional plan layout.

September 2018

At the time of the last external review before the final proposal, I have now gained clarity concerning what the design proposal should be as an urban reaction and a heritage response. The bigger picture of the scheme is therefore established. I realize, however, that there are several spatial aspects that still needs to be resolved on a smaller scale. These include the interior of the new contemporary literature wing. The biggest challenge with this is to translate conceptually sound ideas, about what the space should say, into architectural space that will also work on a practical level. This is something I aim to address in the final design proposal.

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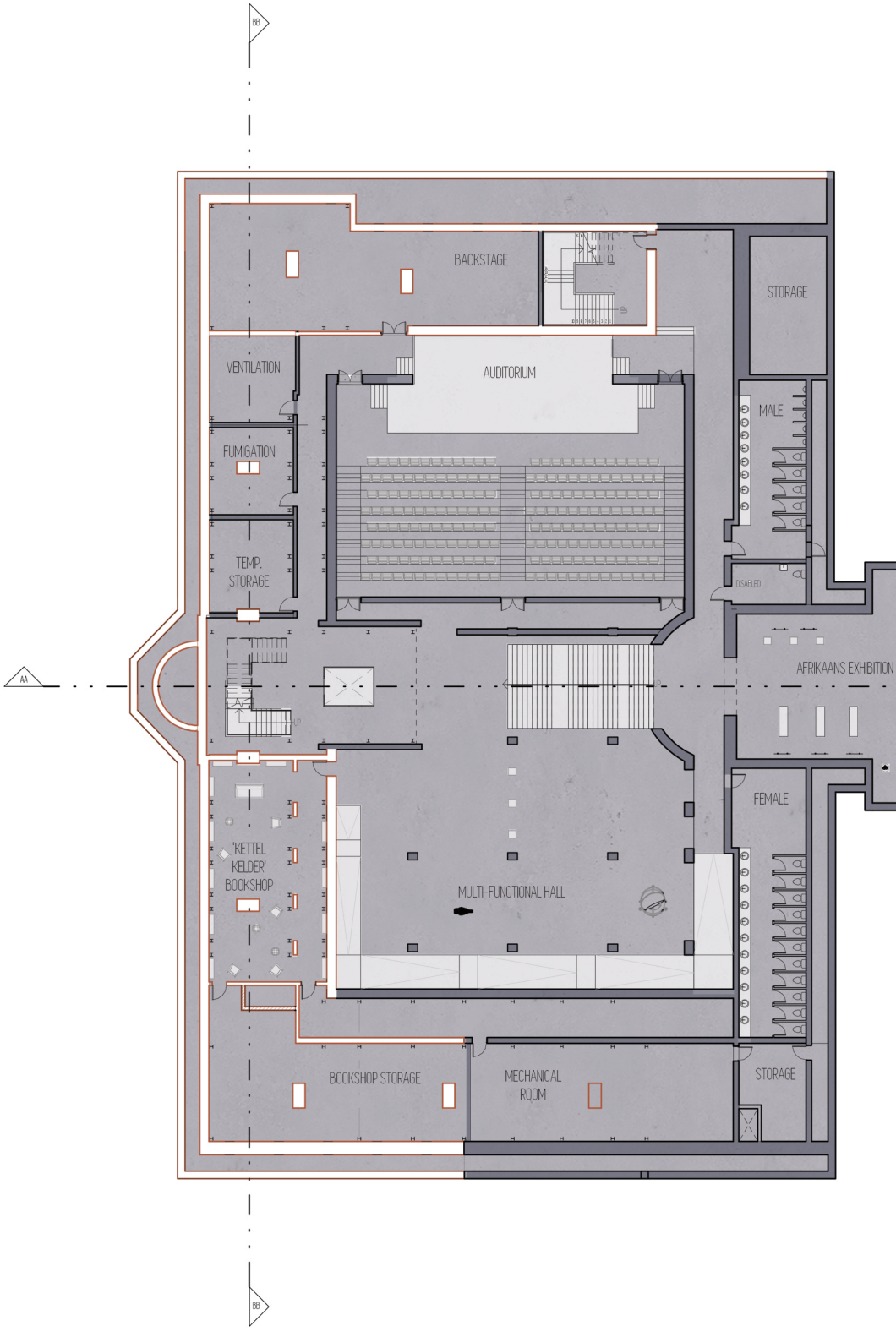
# 4.3 Final Proposal

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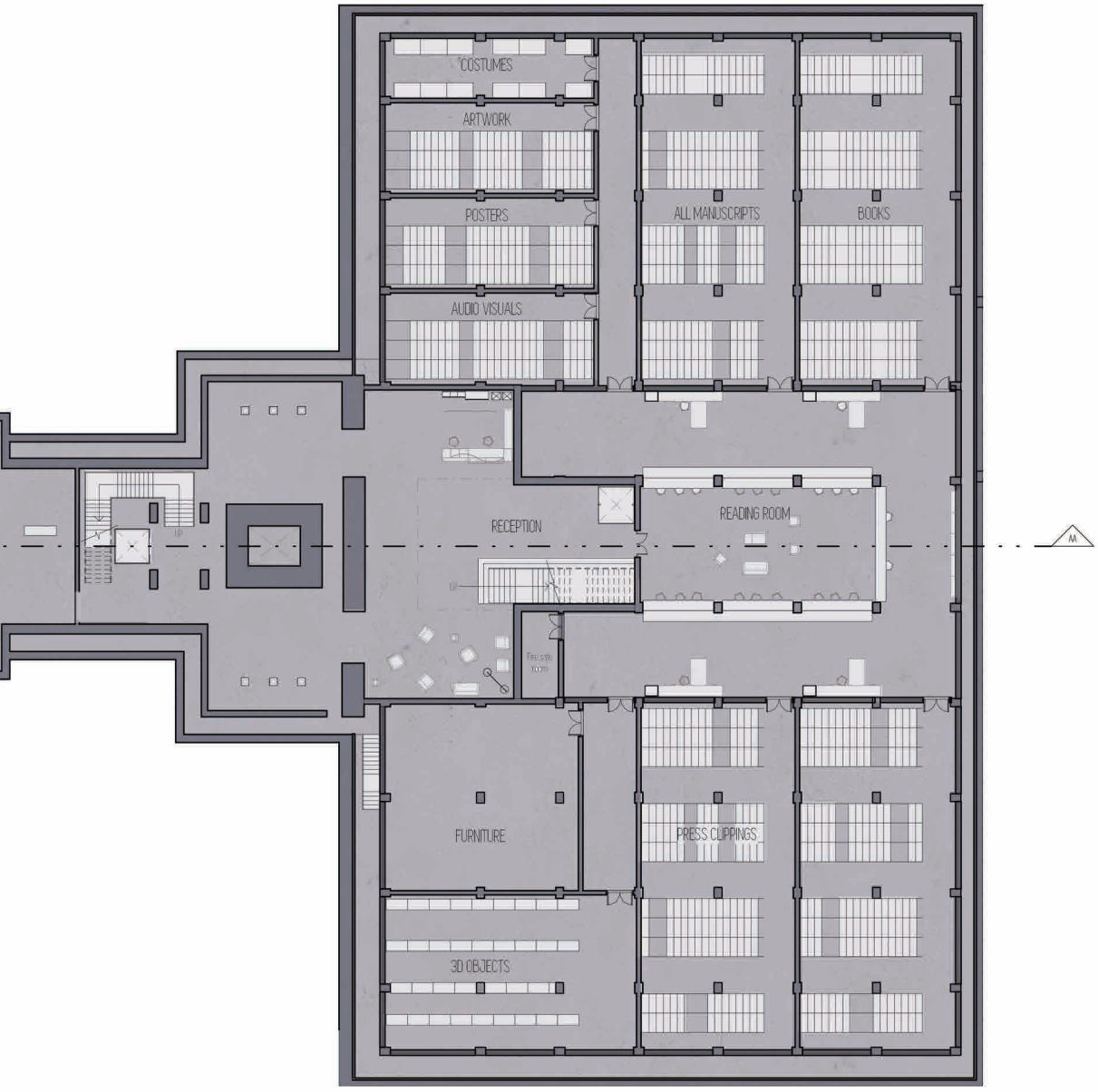
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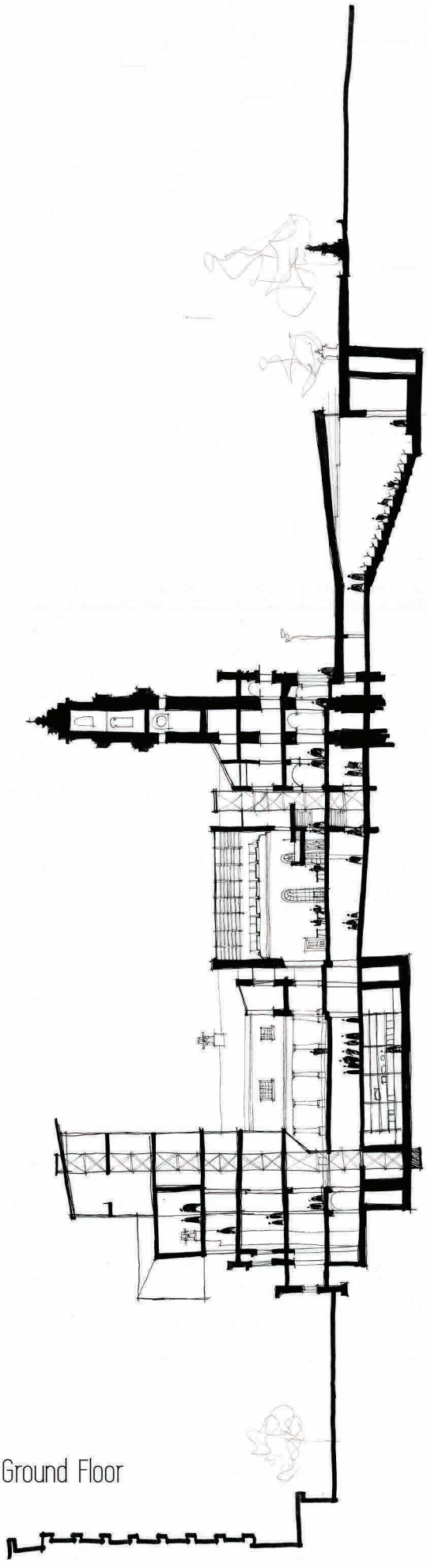

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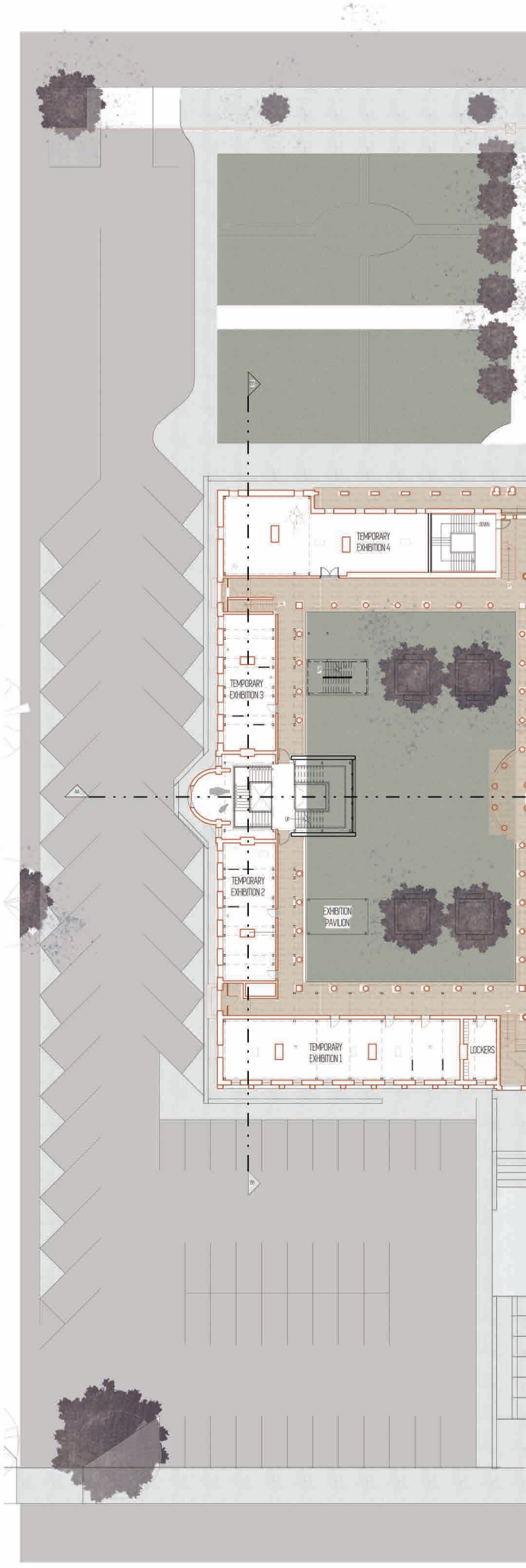

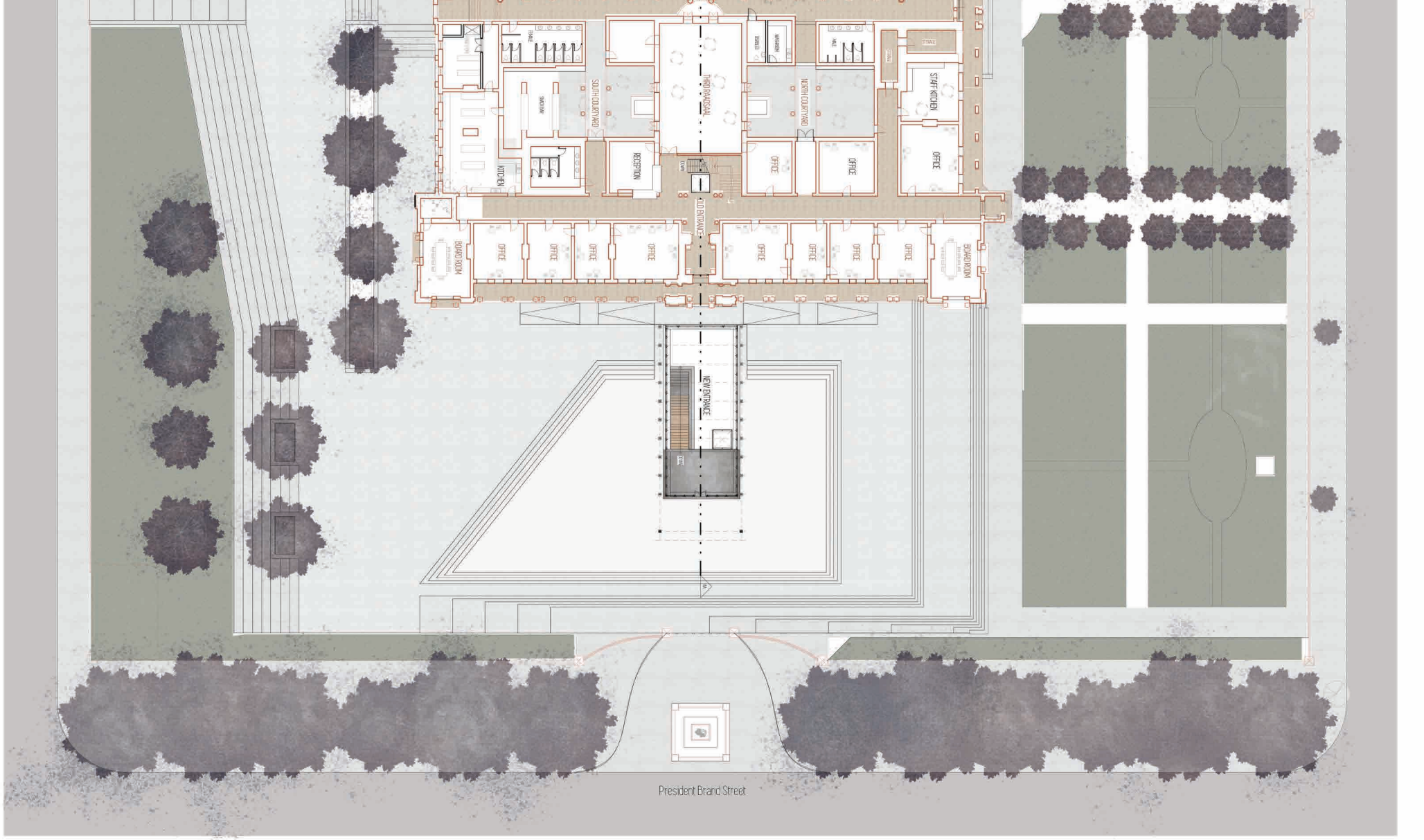
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RECEPTION
OFFICE
OFFICE
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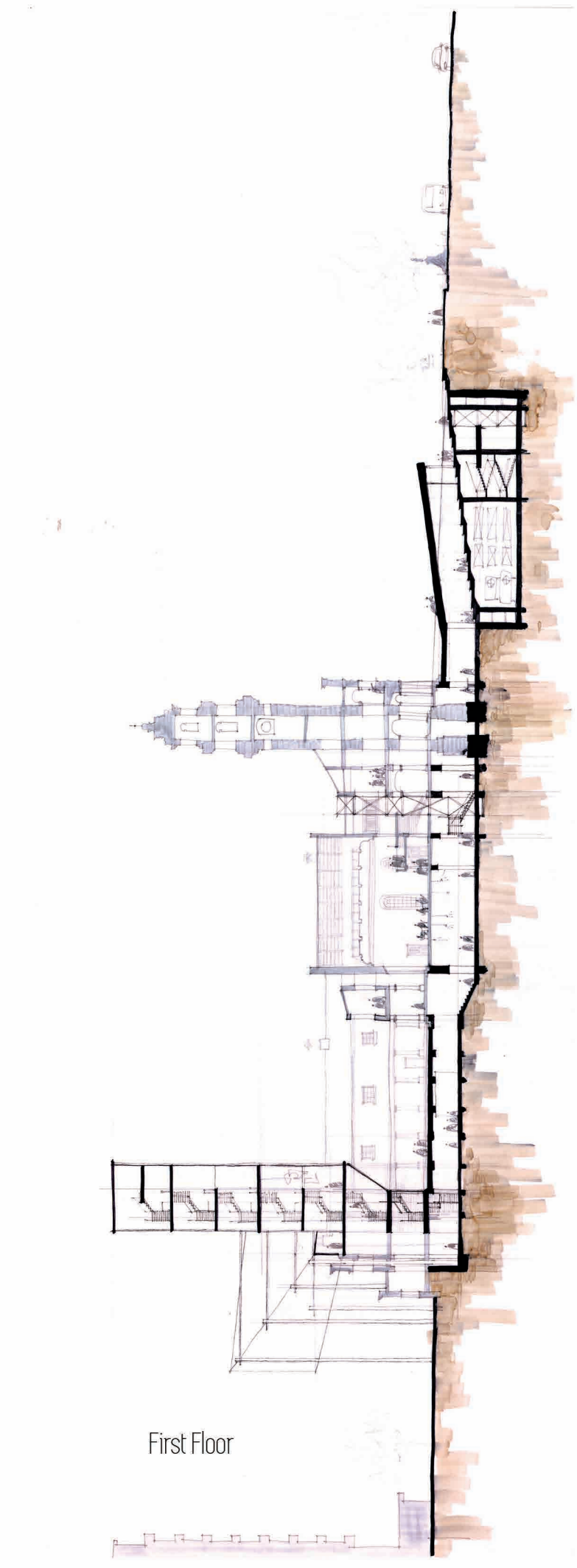
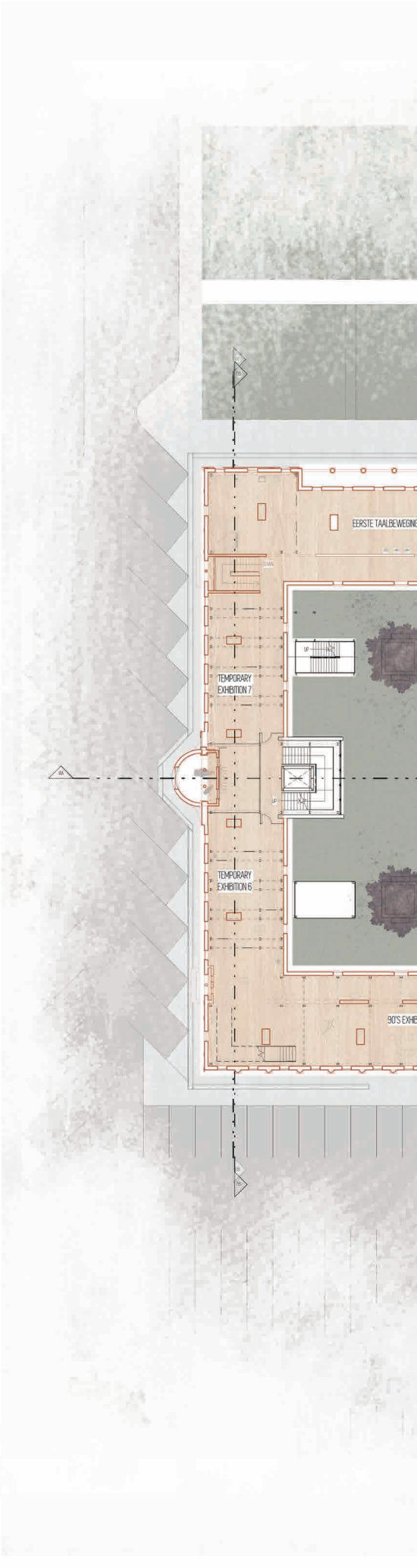


First Floor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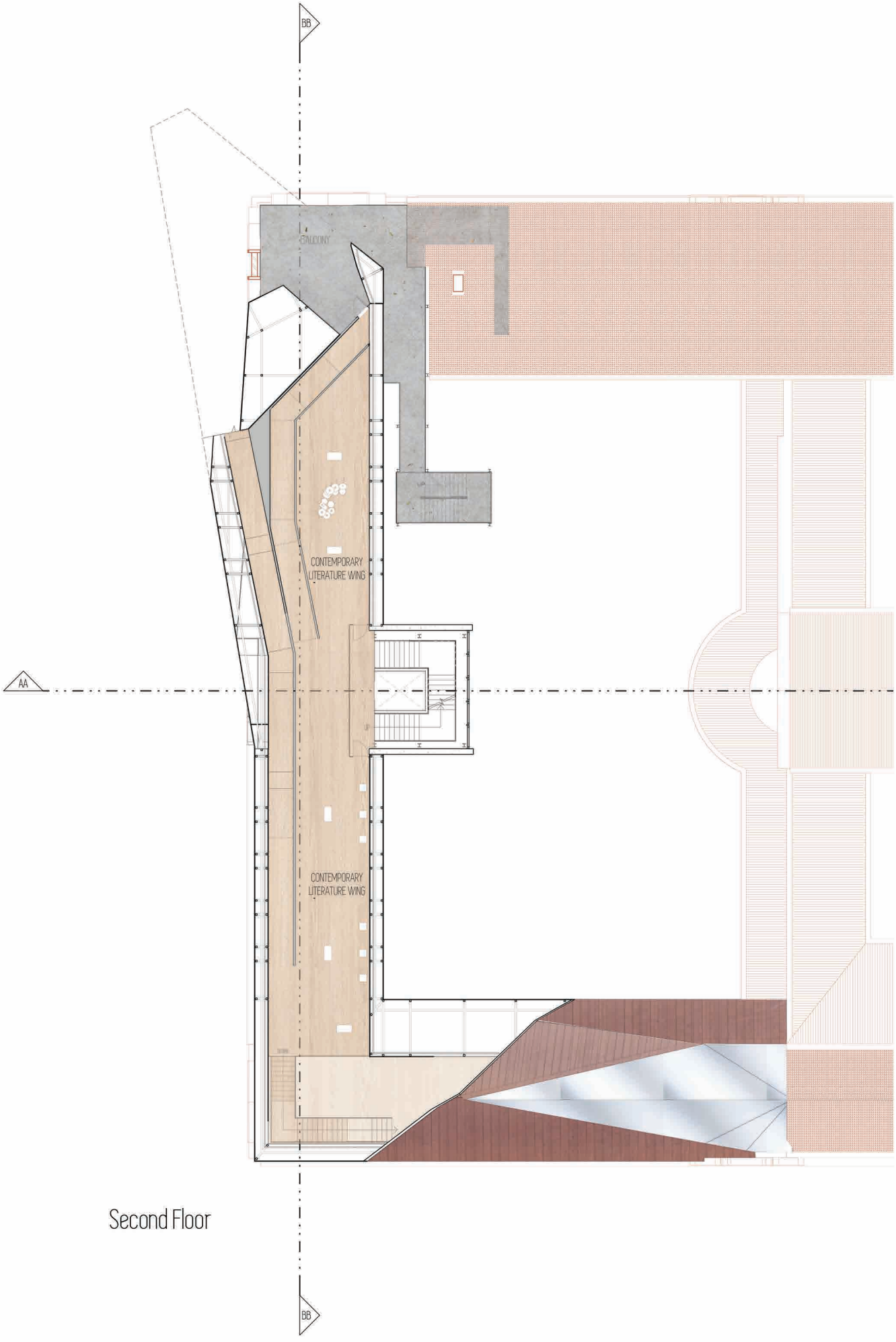


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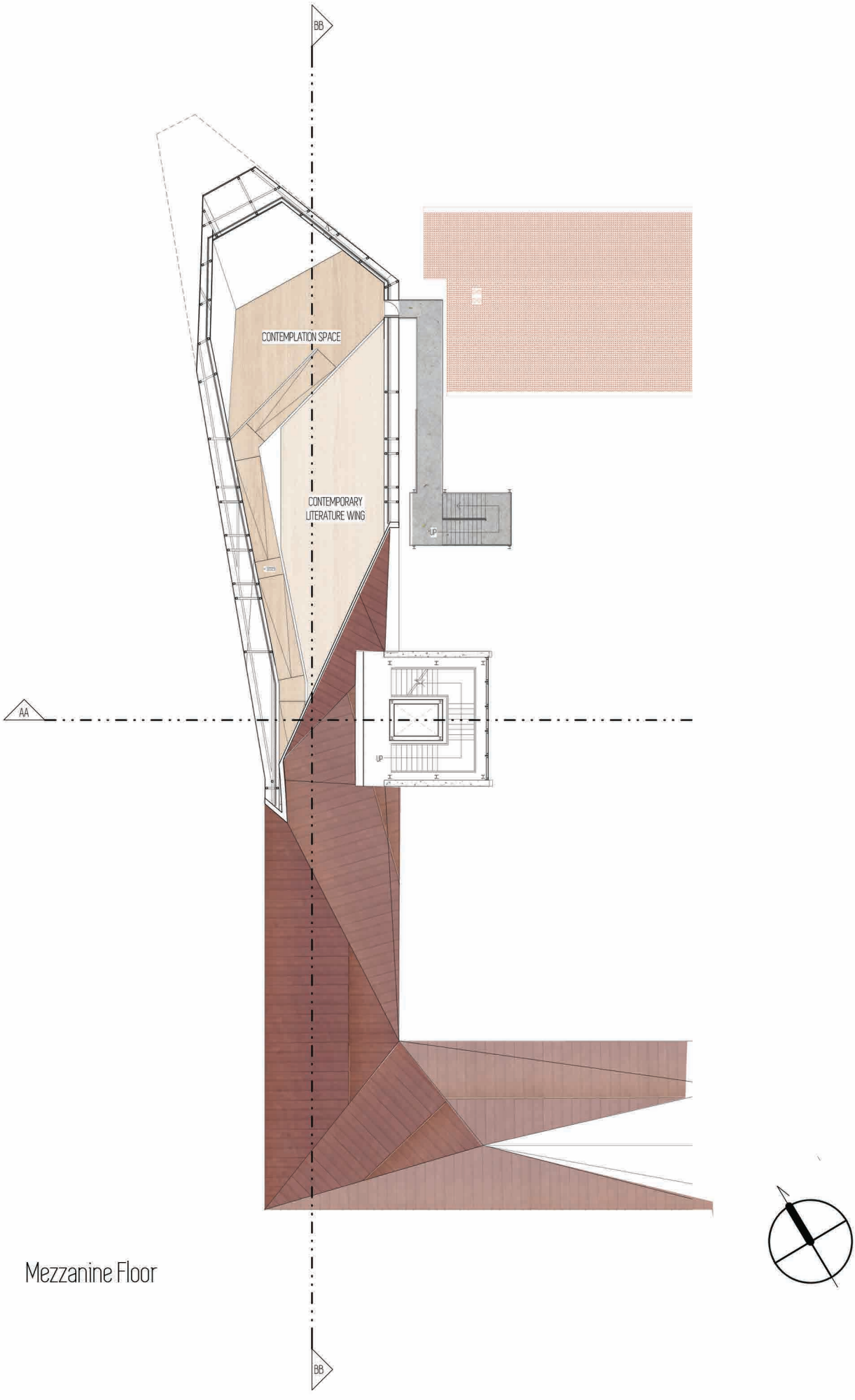


Mezzanine Floor




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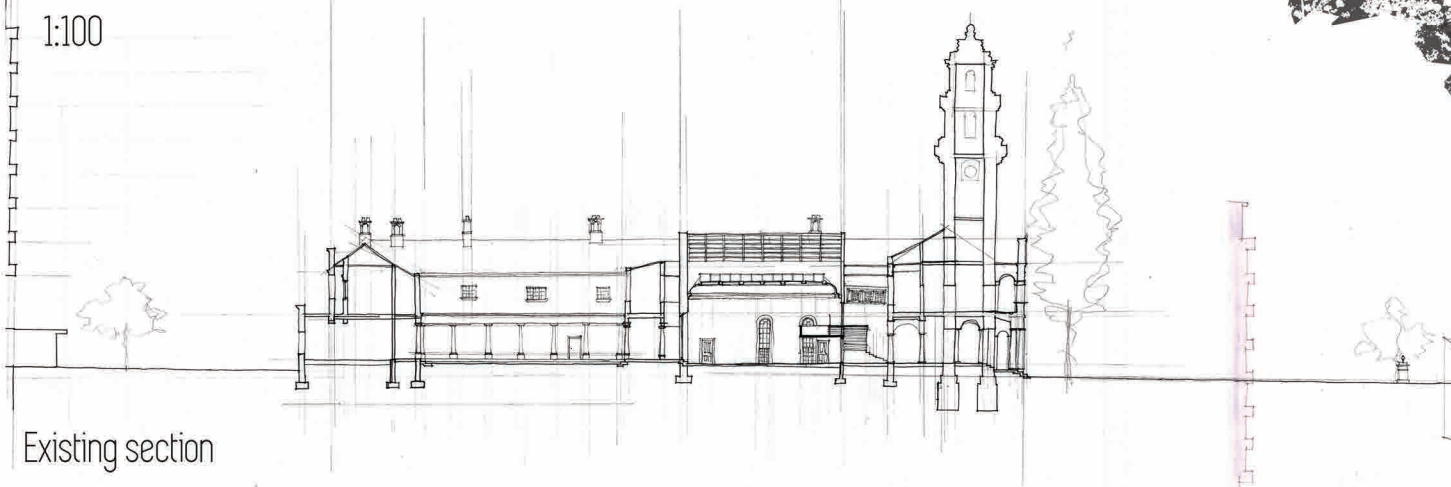
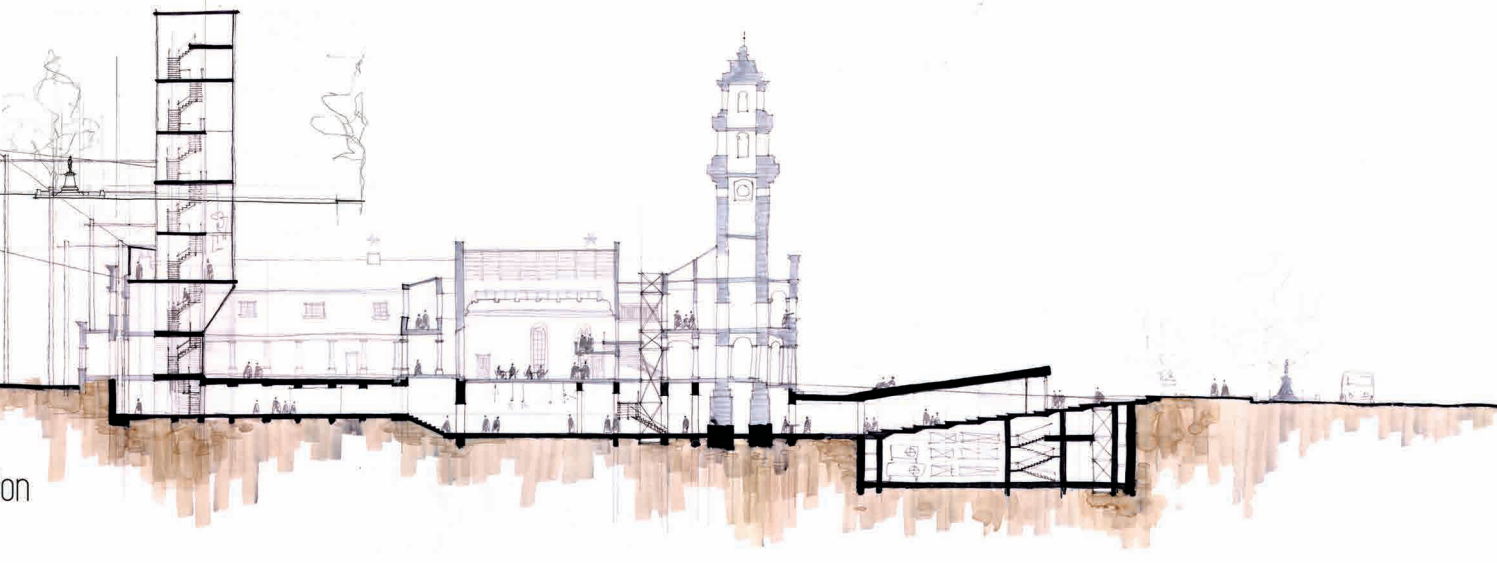


Existing section

Development secti



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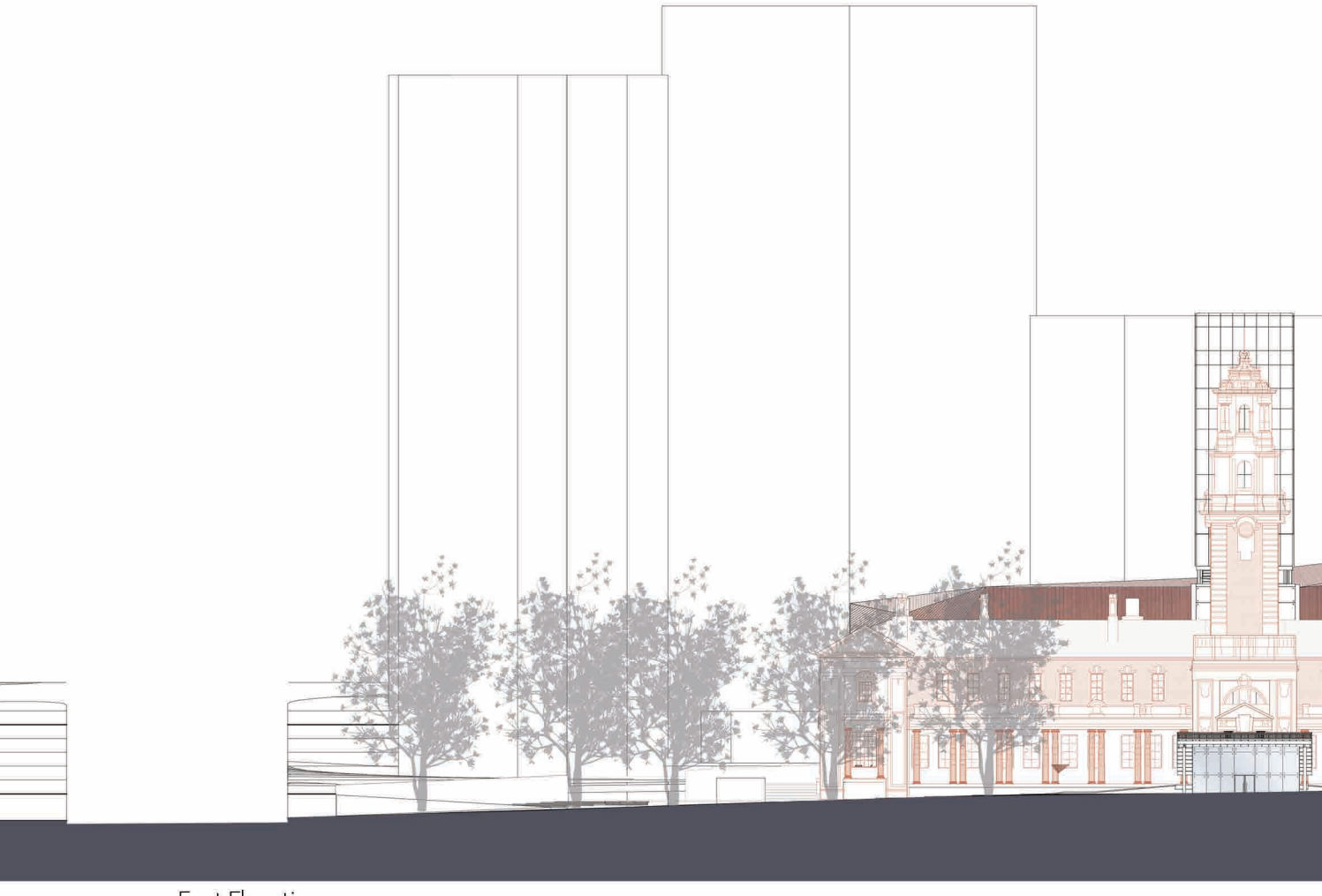
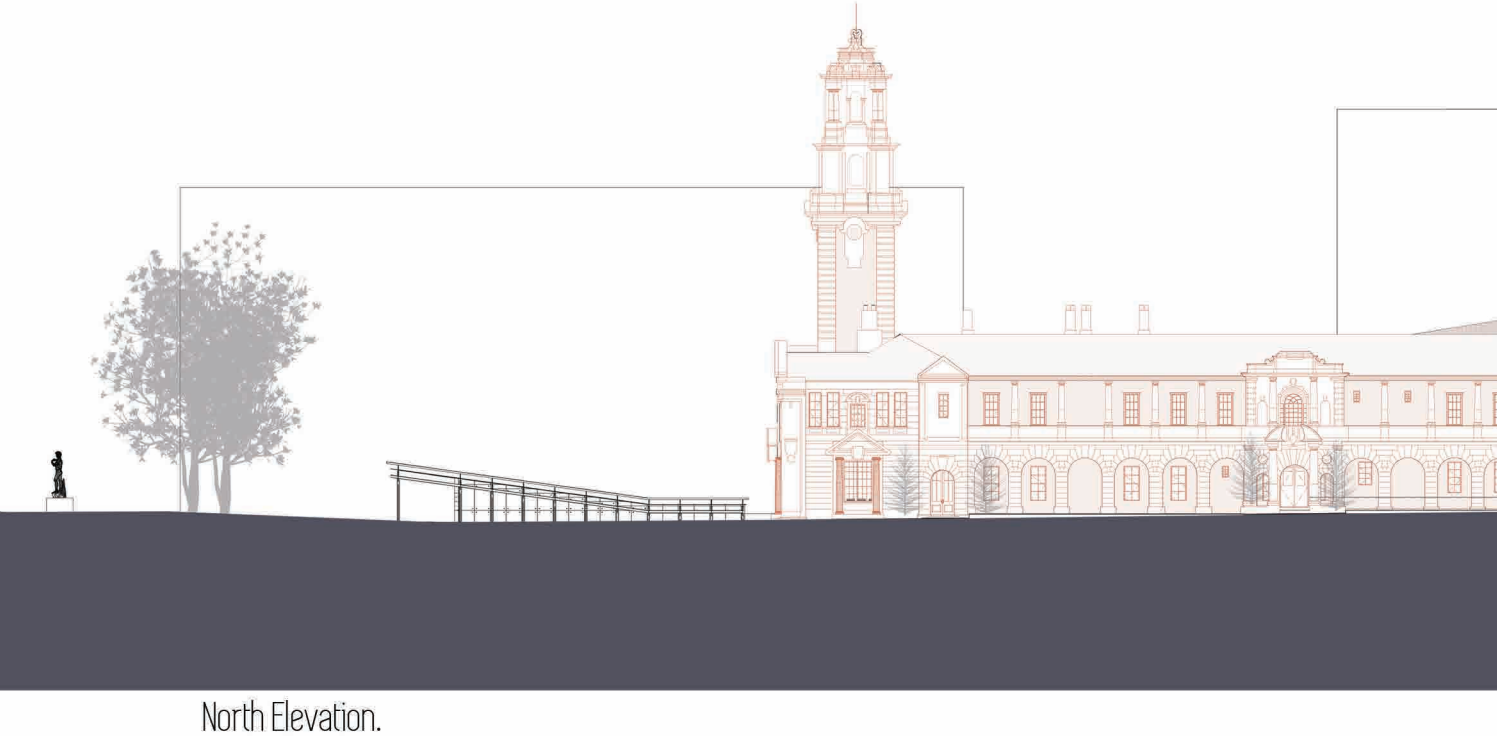
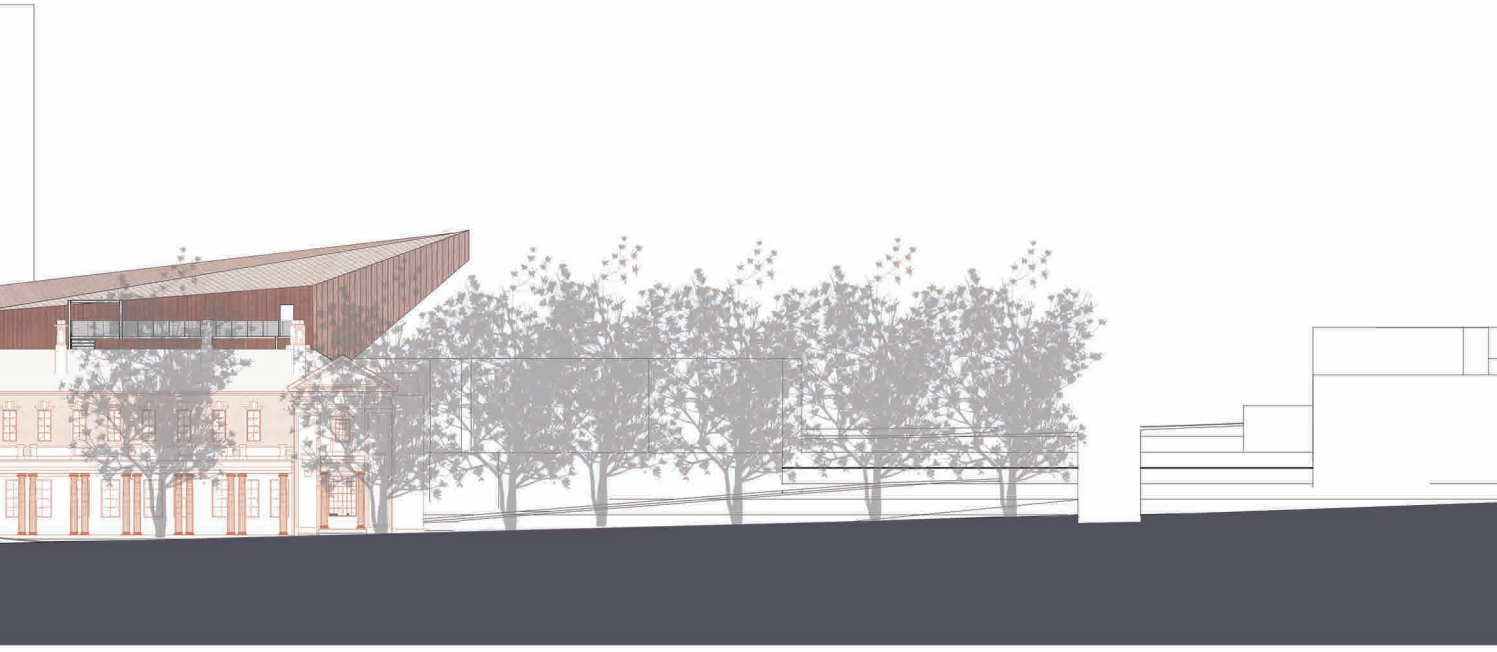


East Elevation



North Elevation.







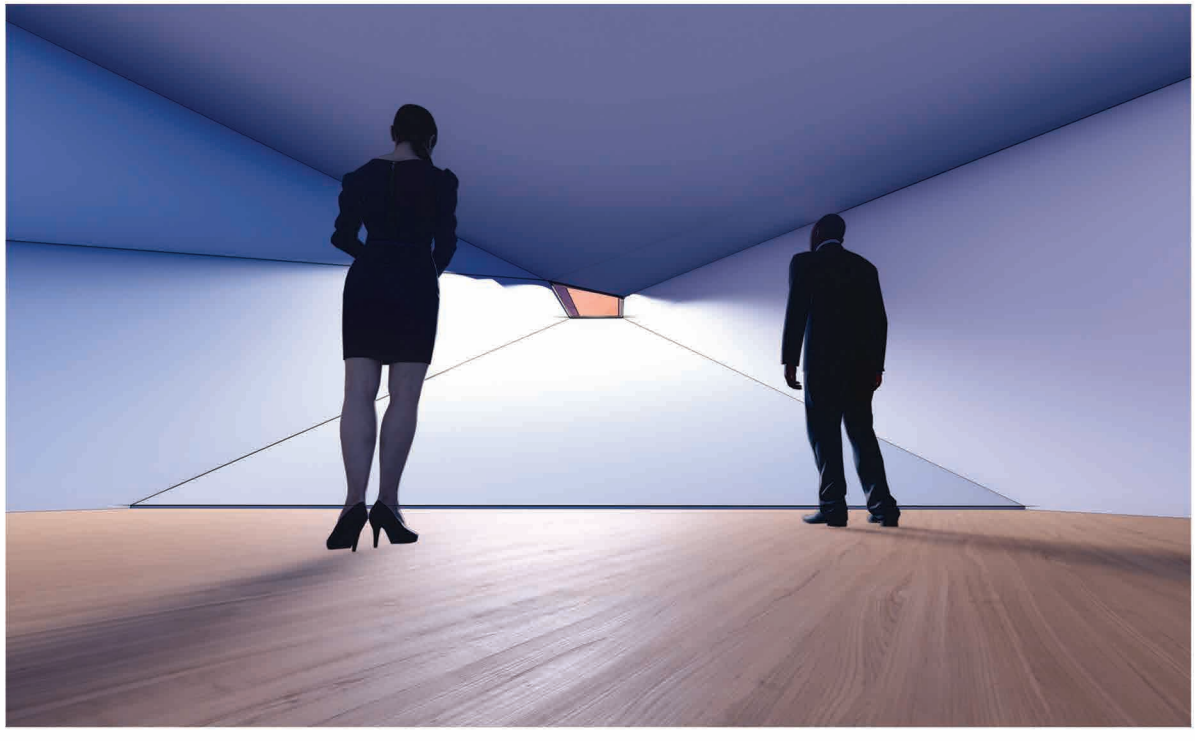
West Elevation.





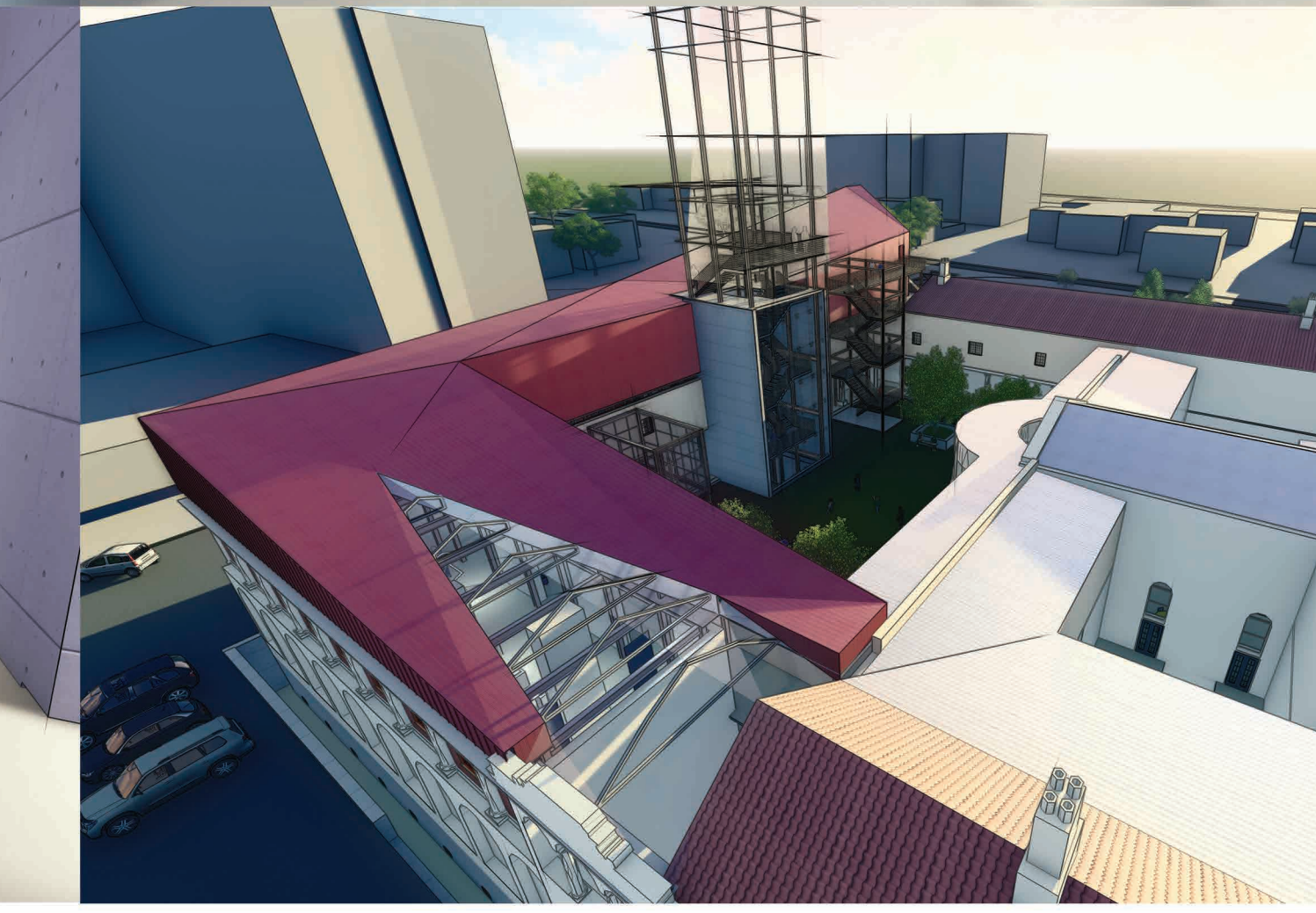




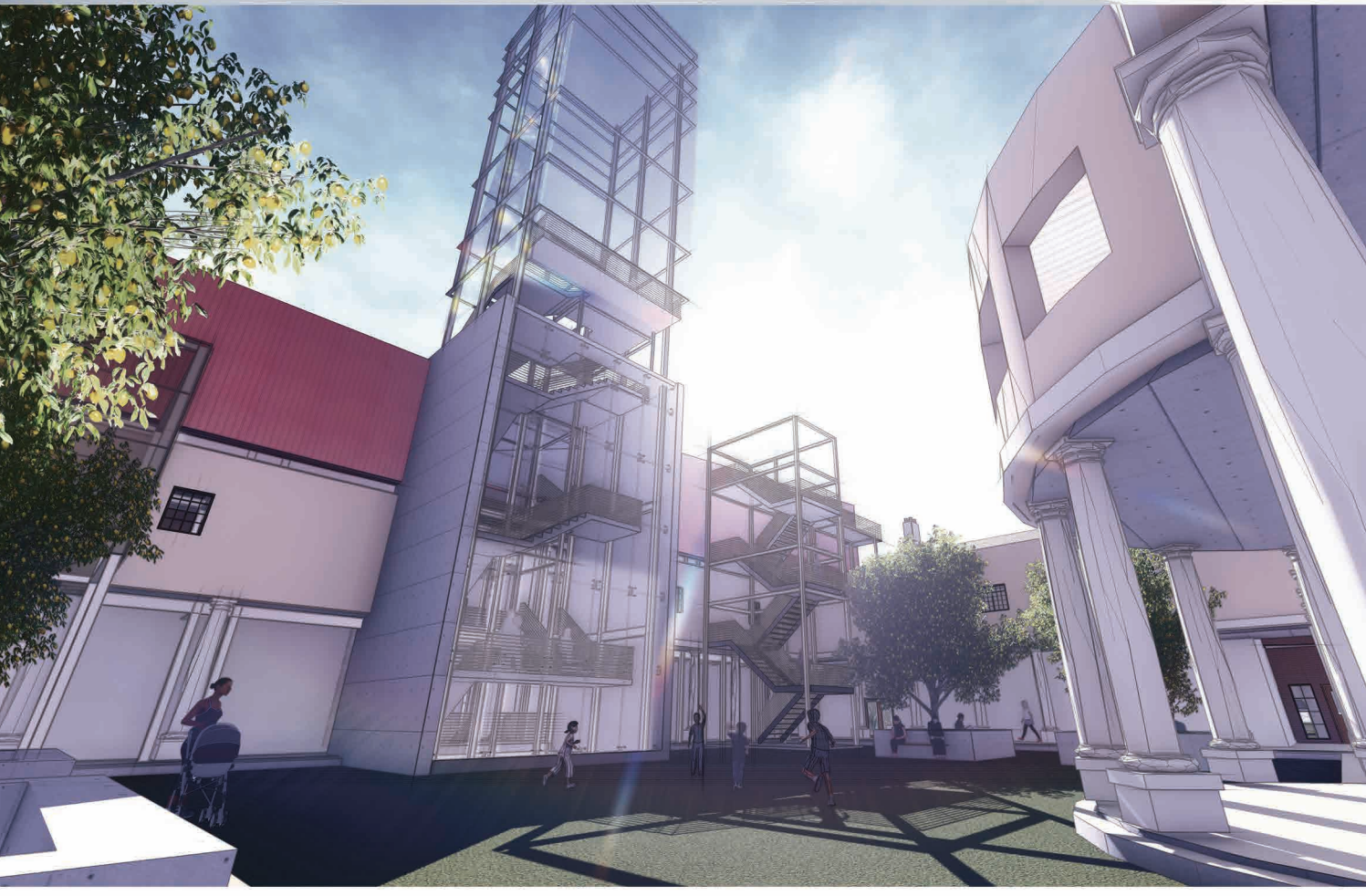


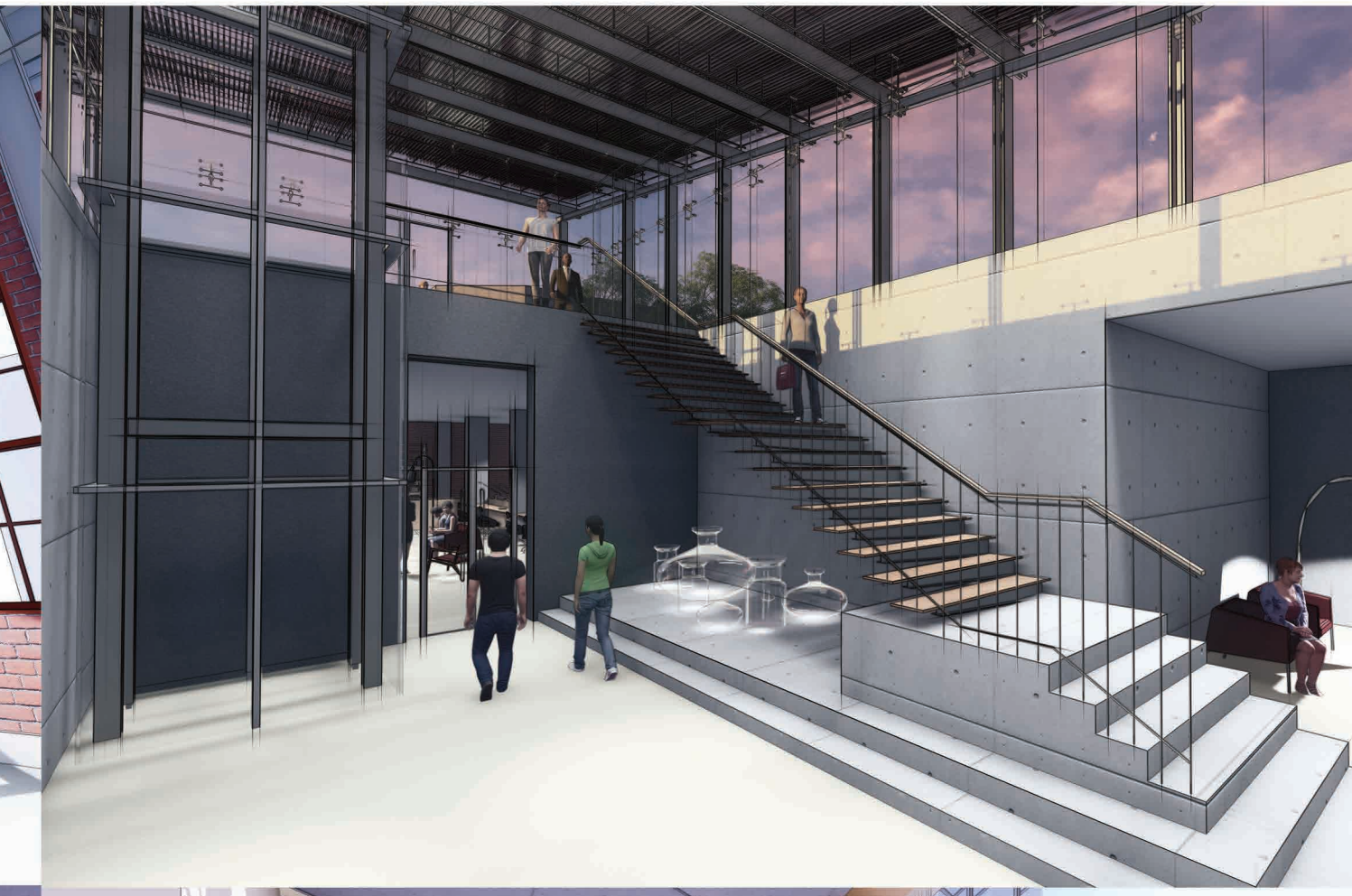










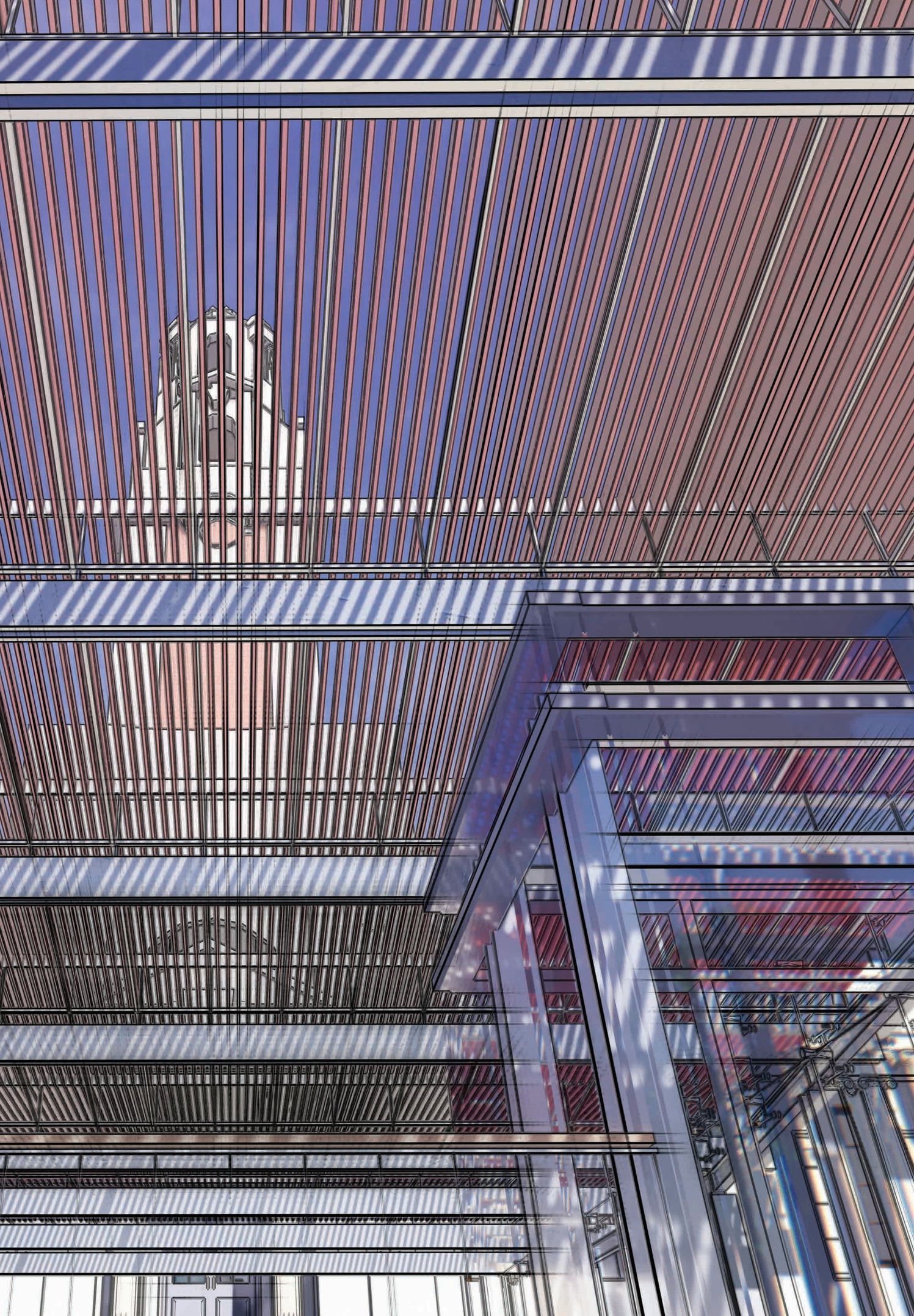


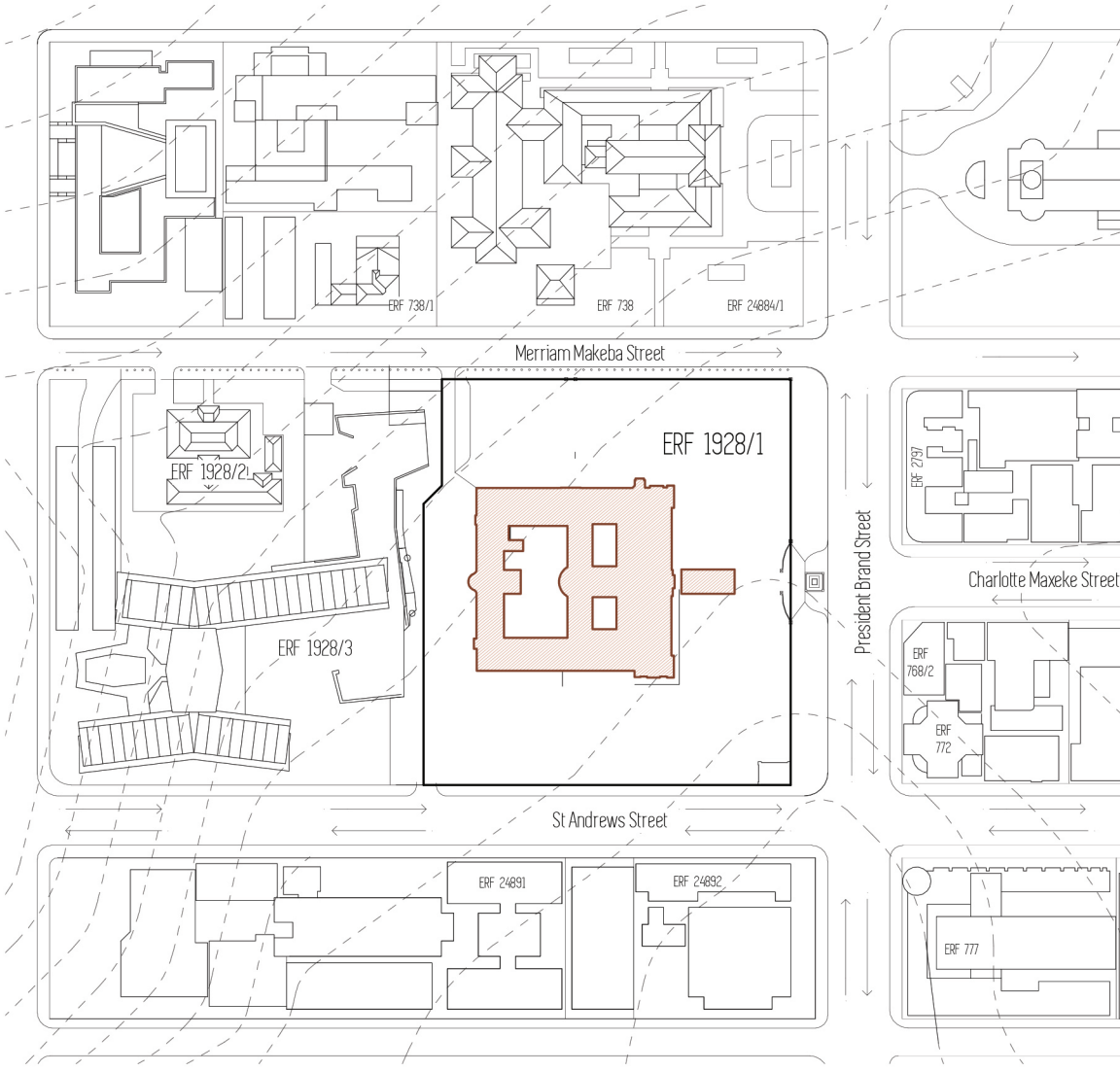






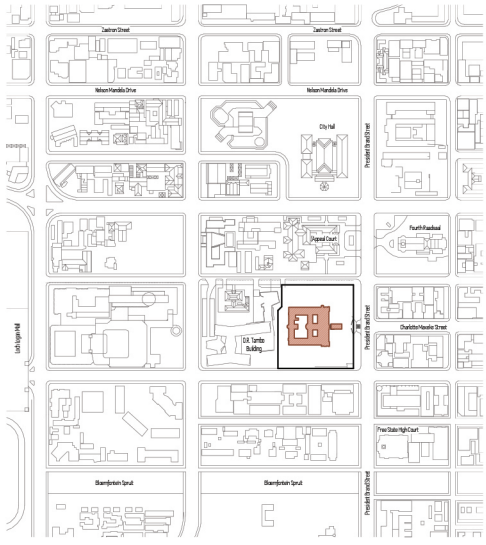







Locality Plan

1:1000




Locality Plan

1:5000



## SCHEDULE OF RIGHTS

### PROPERTY DESCRIPTION

| | |
|---|---|
| Erf/Portion : 1928 | Site area: 14672 m² |
| Township: Bloemfontein Central Buisness District - President Brand Street Conservation Area | Title deed No.: 456231 |

### ZONING INFORMATION

| | | | |
|---|---|---|---|
| Town Planning Scheme | Bloemfontein Town Planning Scheme | Ammendment Scheme No. | 3 |
| Use Zone | Public buildings: Museum | Annexe No. | 1 |

### DEVELOPMENT CONTROL MEASURES

| Permissible | Control | Actual |
|---|---|---|
| No Restriction | Height of Buildings | 32 m |
| 50% | Coverage | 27% |
| 1:1 | Floor Area Ratio | 1:0.9 |
| | Floor Area | 13888 m² |
| minimum 3.0m from site boundary | Building Lines | 3.0m from site boundary |

### PARKING

| Parking Ratio per Use | Area per Use | Parking Bays Required |
|---|---|---|
| Museum/ Libraries: 2 Parking bays per use 100m² floor area | 3200 m² | 64 Parking bays |
| | | |

| | |
|---|---|
| TOTAL PARKING BAYS REQUIRED | 64 Parking bays |
| TOTAL PARKING BAYS PROVIDED | 64 Parking bays |
| SURPLUS NO. OF PARKING BAYS | 0 Parking bays |

### SANITARY POPULATION SCHEDULE:

REQUIRED

| MALE | | | | FEMALE | | |
|---|---|---|---|---|---|---|
| WC | U | WHB | S | WC | WHB | S |
| 8 | 12 | 11 | 0 | 18 | 11 | 0 |

PROVIDED

| MALE | | | | FEMALE | | |
|---|---|---|---|---|---|---|
| WC | U | WHB | S | WC | WHB | S |
| 10 | 16 | 20 | 0 | 29 | 27 | 0 |

The information provided above above is hereby certified to be correct and precise

NAME: Madeli Beyers SIGNATURE:

DATE: 11/10/2018 PLAN NO.: 12451231

| | |
|---|---|
| GROSS BUILDING AREA (Council GBA) | 13888 m² |

PURPOSE OF ISSUE
Issued for information

PROJECT
Expansion and adaptation of NALN

TITLE
Locality Plan & Schedule Rights

CLIENT
NALN

| DRAWN BY | CHECKED BY | DATE |
|---|---|---|
| Madeli Beyers | Checker | 09/11/18 |

| SCALE (@ A1) | PROJECT NUMBER |
|---|---|
| As indicated | 15 |

| DRAWING NUMBER | REV |
|---|---|
| A101 | |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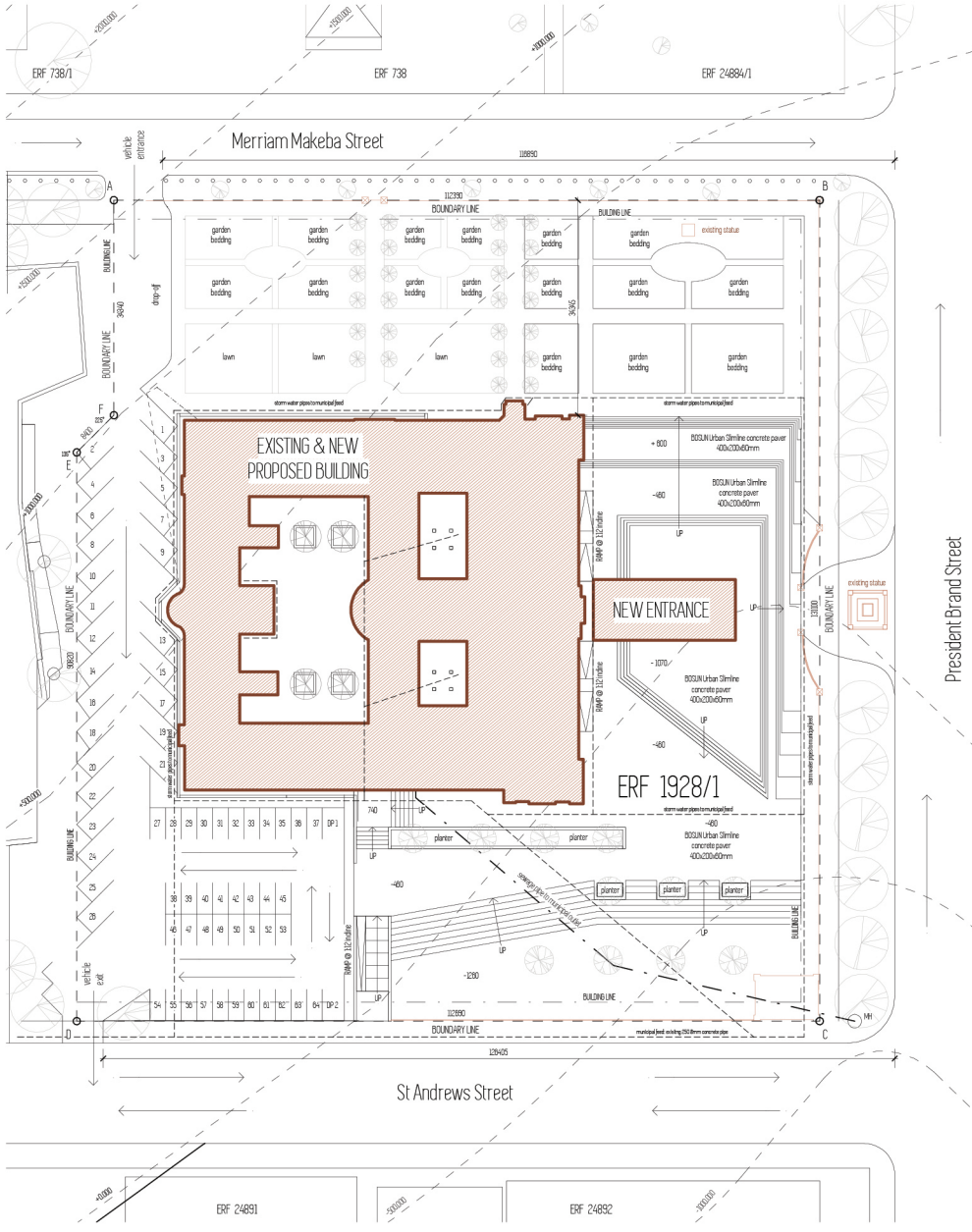


Site Development Plan

1:500




PURPOSE OF ISSUE

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PROJECT

# Expansion and adaptation of NALN

TITLE

## Site Development Plan

CLIENT

NALN

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|---|---|
| 1 : 500 | 15 |

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|---|---|
| A102 | |


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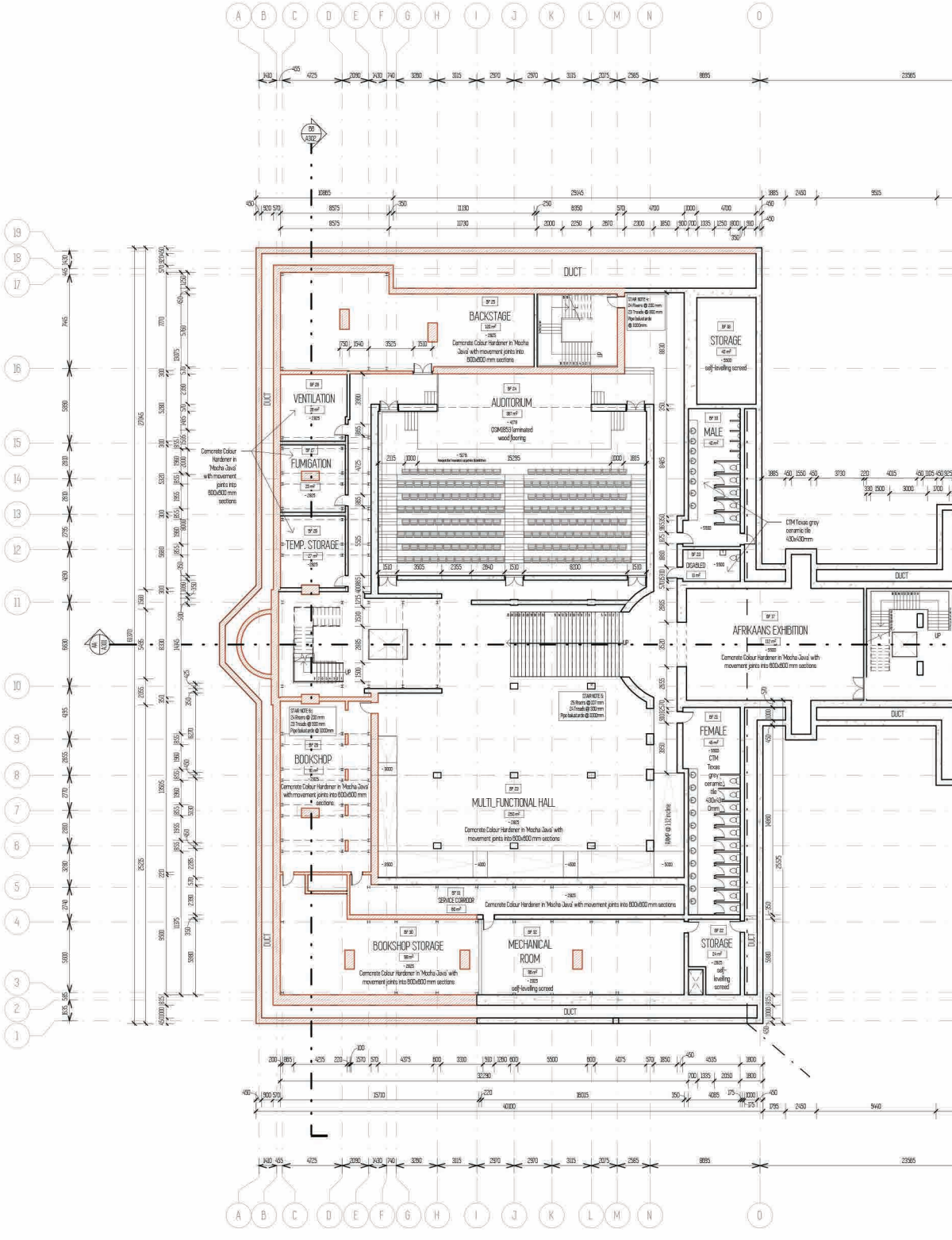
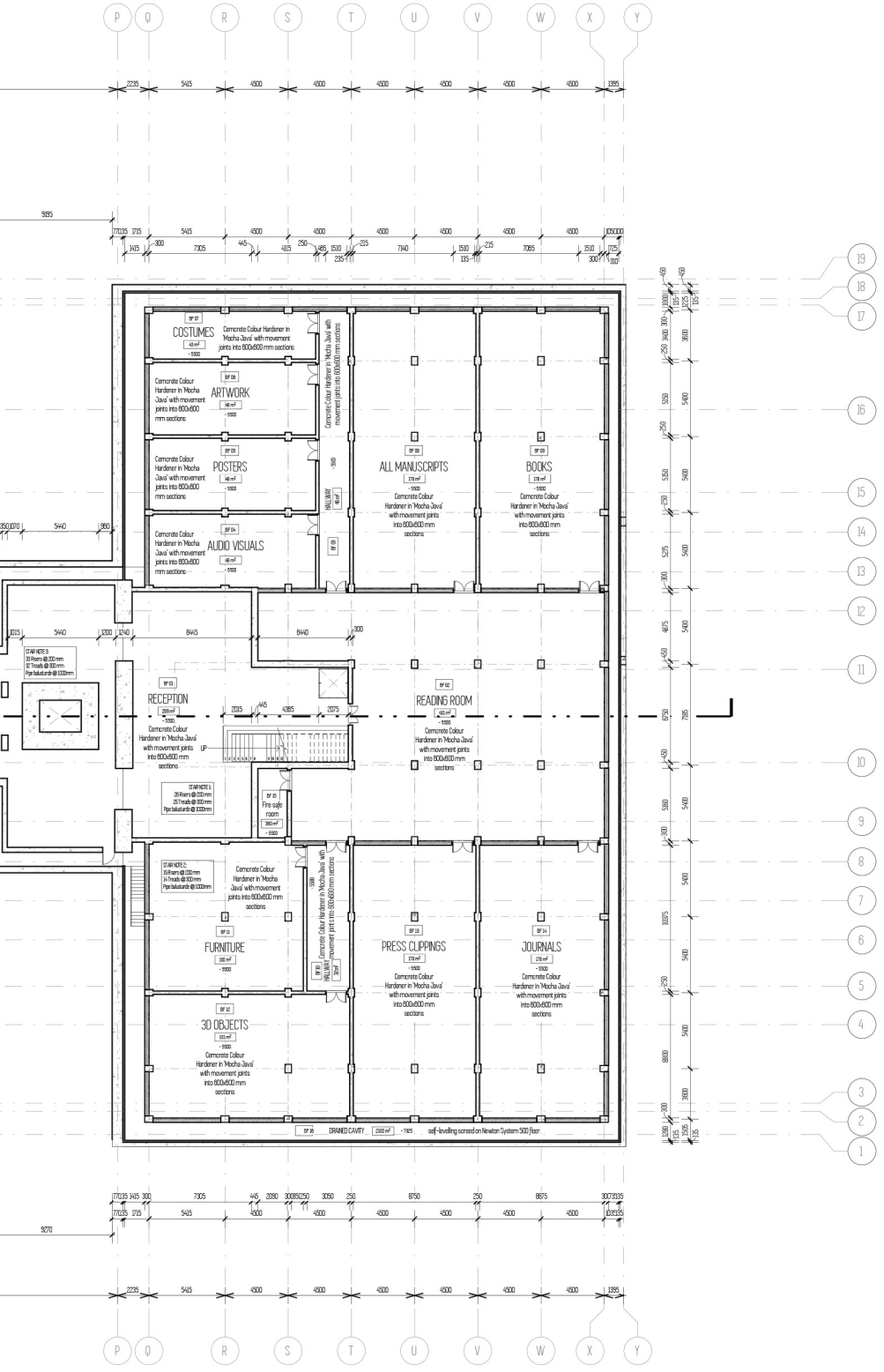



Basement Floor Plan

1:200




PURPOSE OF ISSUE

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PROJECT

# Expansion and adaptation of NALN

TITLE

# Basement Floor Plan

CLIENT

NALN

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| SCALE (@ A1) | PROJECT NUMBER |
|---|---|
| 1 : 200 | 15 |

| DRAWING NUMBER | REV |
|---|---|
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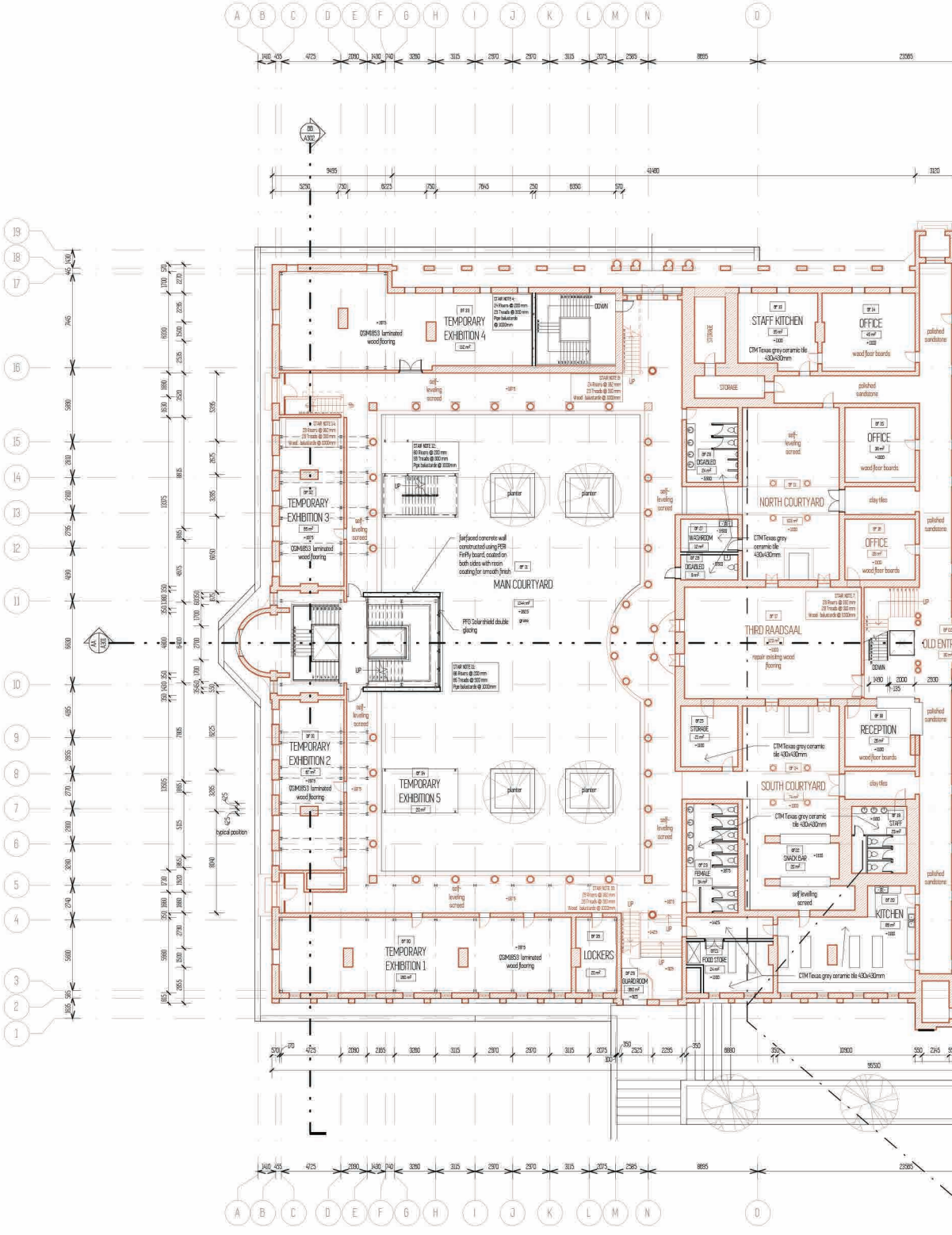
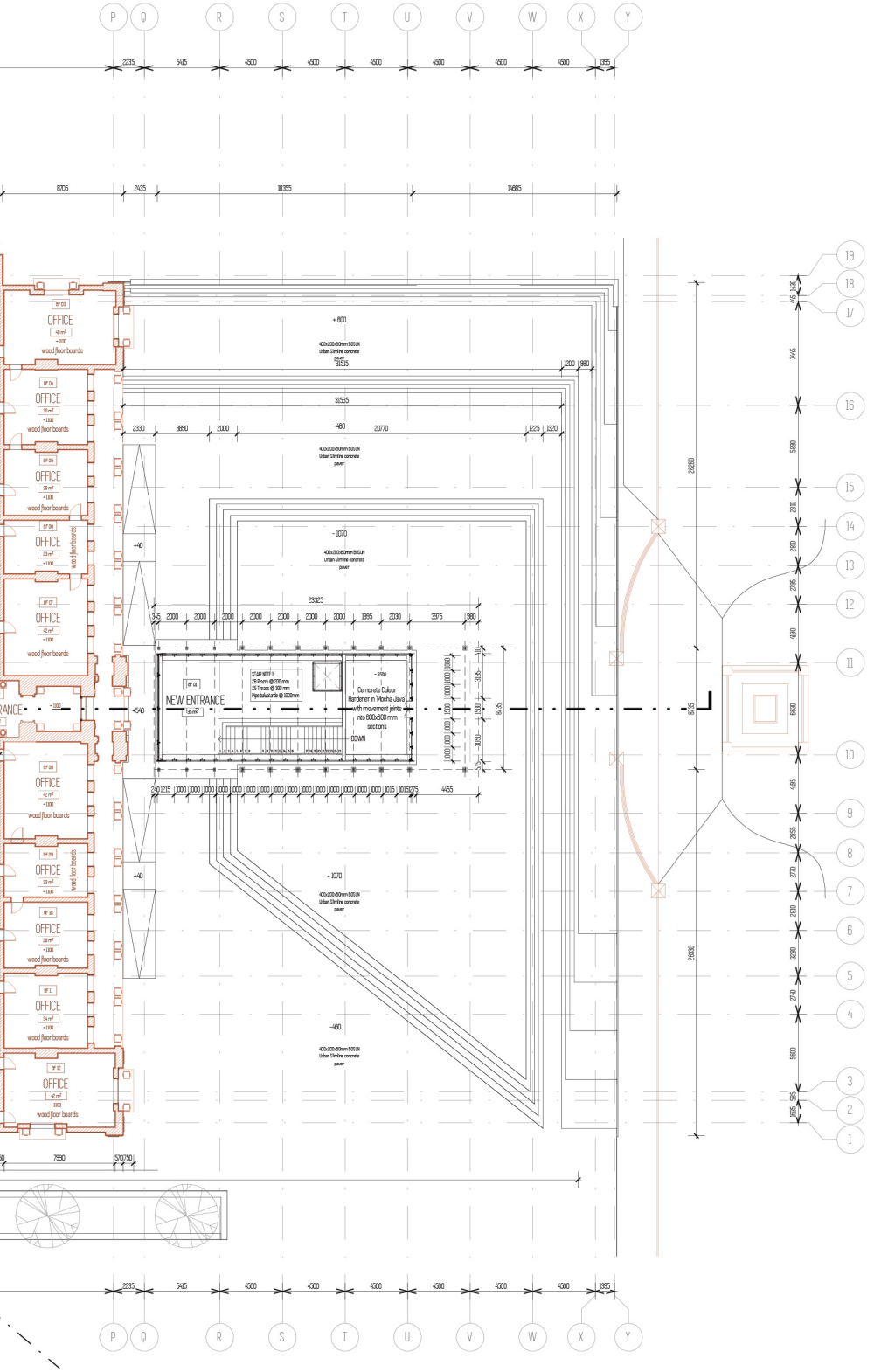



Ground Floor Plan

1:200




PURPOSE OF ISSUE

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PROJECT

# Expansion and adaptation of NALN

TITLE

## Ground Floor Plan

CLIENT

NALN

| DRAWN BY | CHECKED BY | DATE |
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| SCALE (@ A1) | PROJECT NUMBER |
|---|---|
| 1 : 200 | 15 |

| DRAWING NUMBER | REV |
|---|---|
| A104 | |


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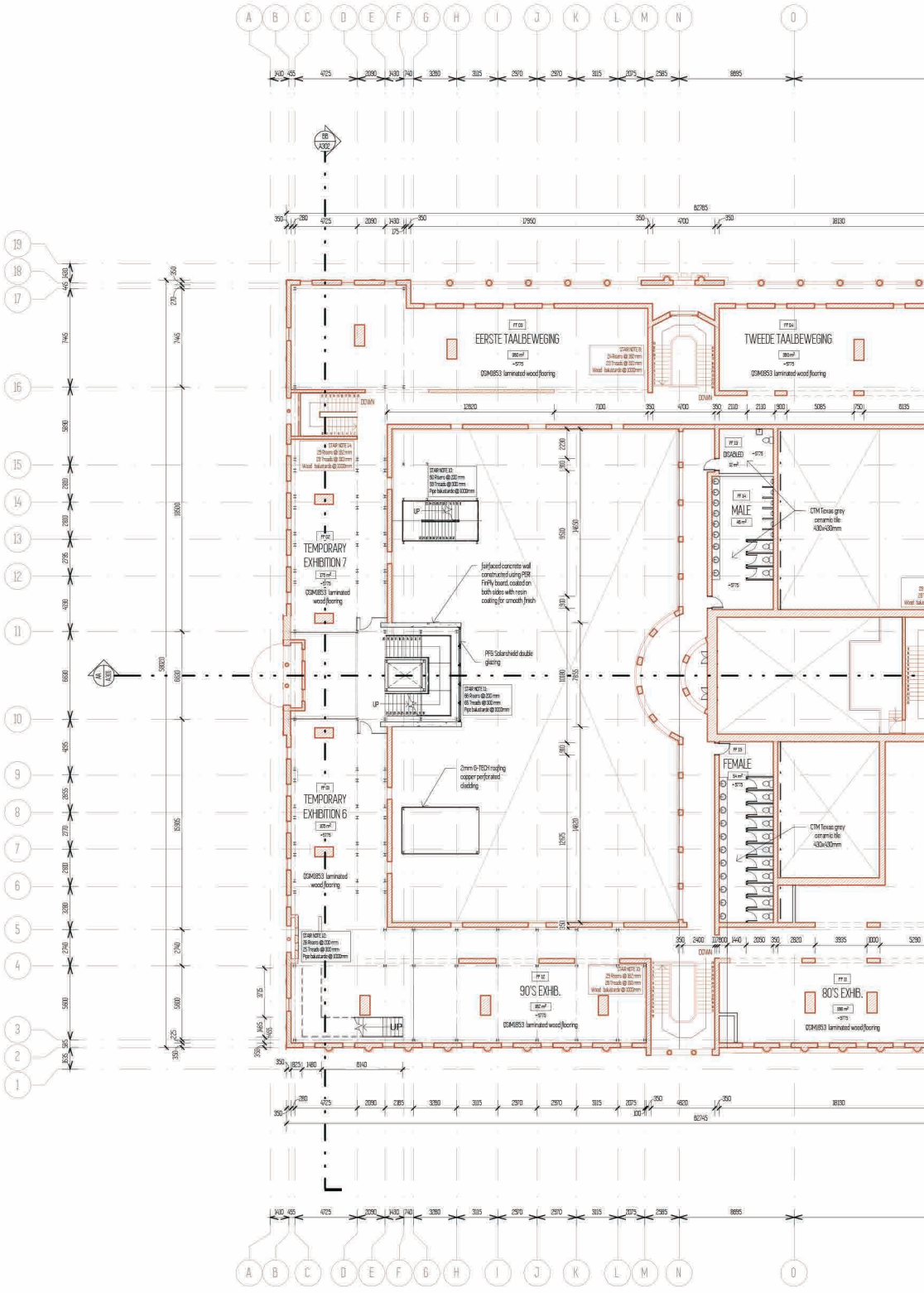
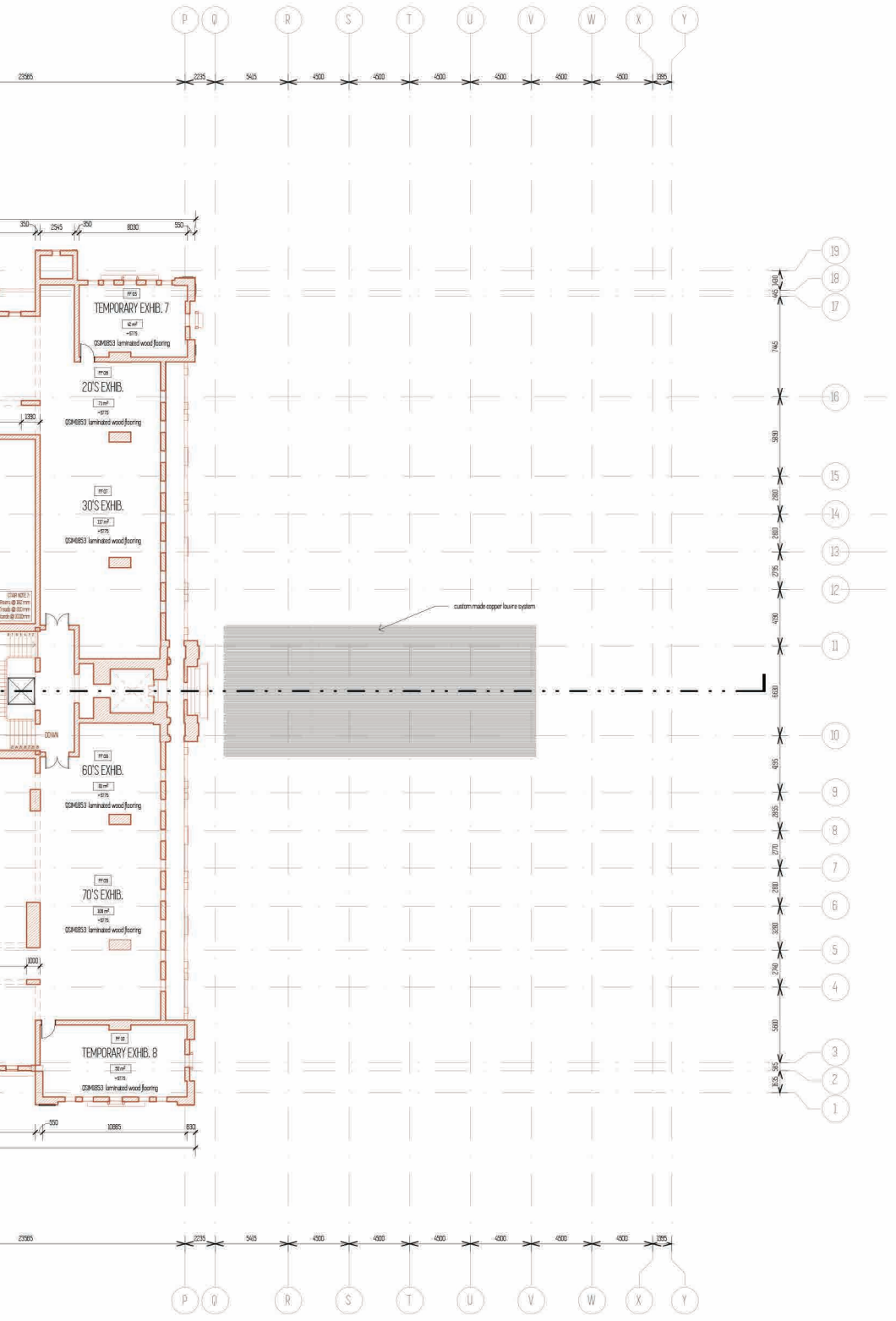



First Floor Plan

1:200

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PROJECT

# Expansion and adaptation of NALN

TITLE

## First Floor Plan

CLIENT

NALN

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|---|---|
| 1:200 | 15 |

| DRAWING NUMBER | REV. |
|---|---|
| A105 | |


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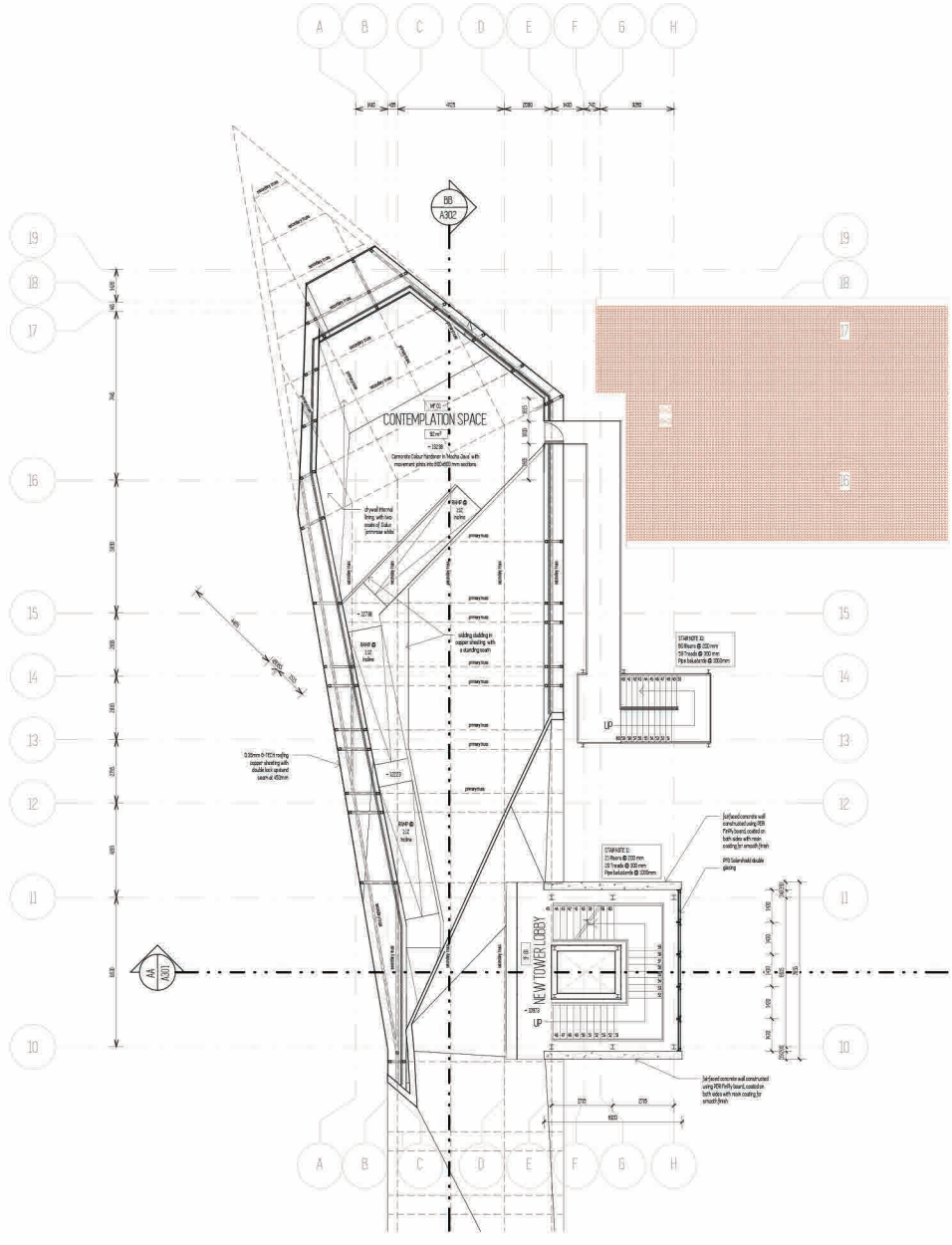
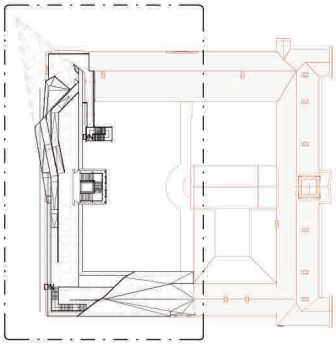
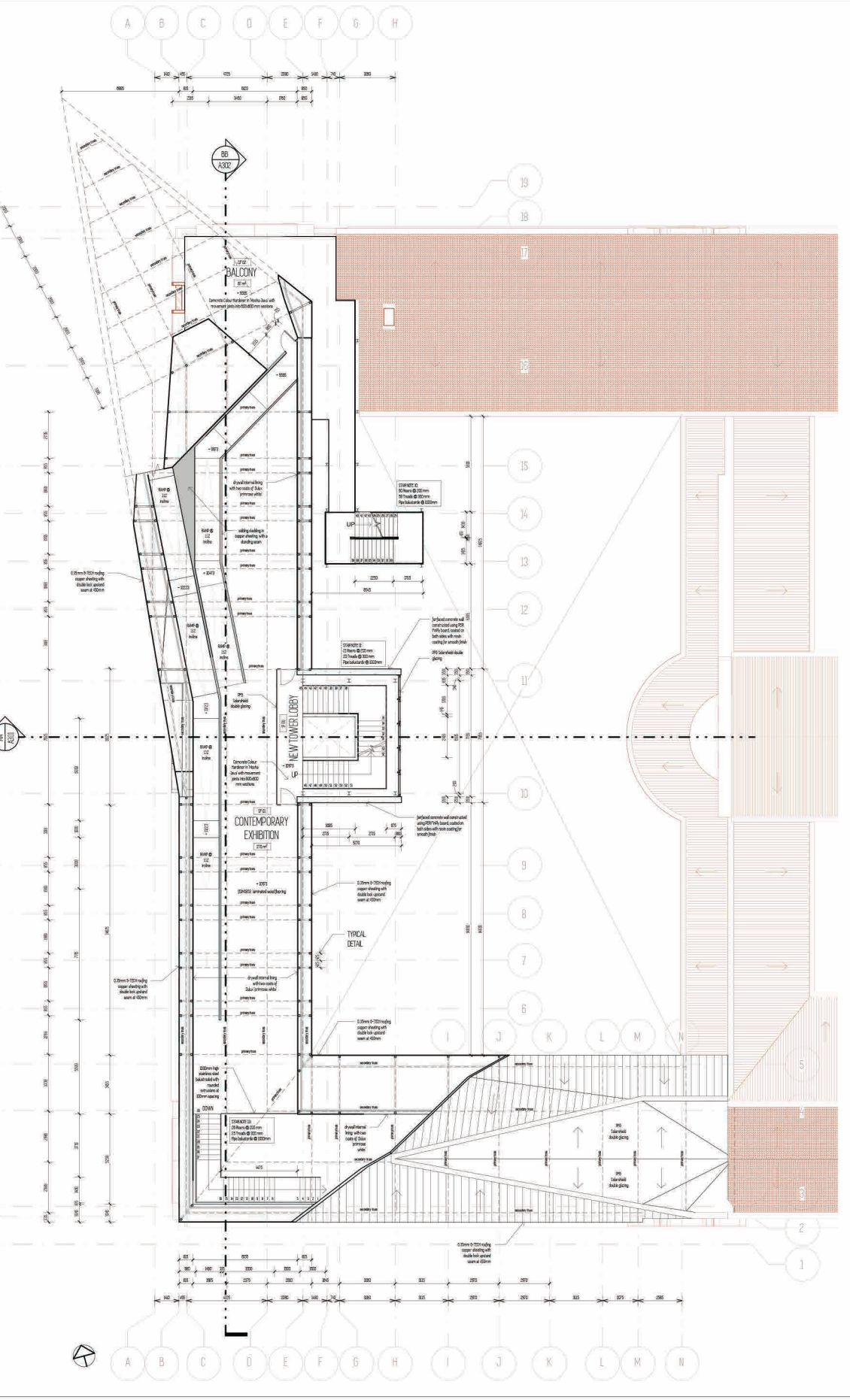



Mezzanine Floor Plan
1:100



Second Floor Plan
1:500

Second Floor Plan
1:100




PURPOSE OF ISSUE
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PROJECT
Expansion and adaptation of NALN

TITLE
Second Floor Plan & Mezzanine Floor Plan

CLIENT
NALN

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|---|---|
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|---|---|
| A106 | |

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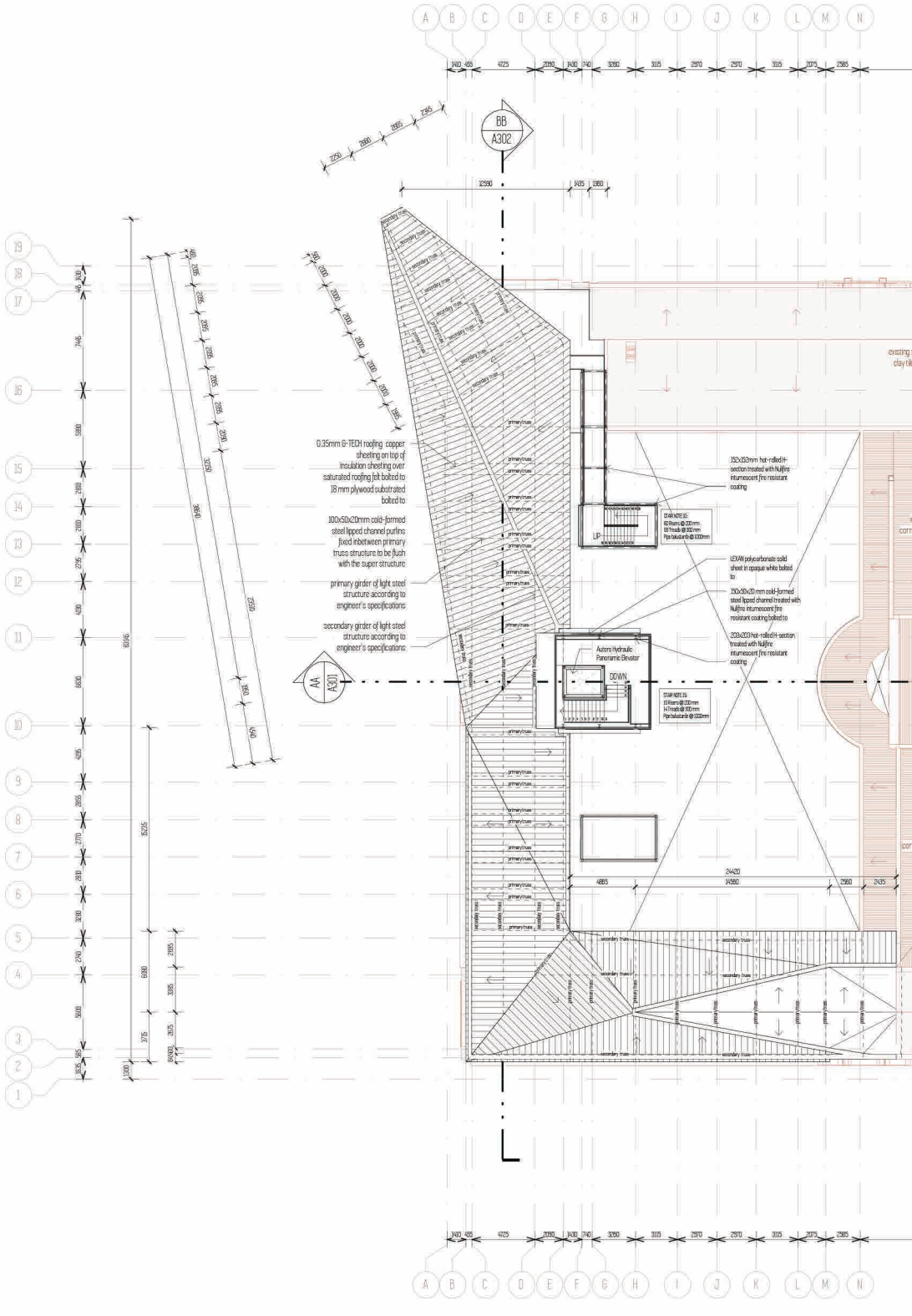
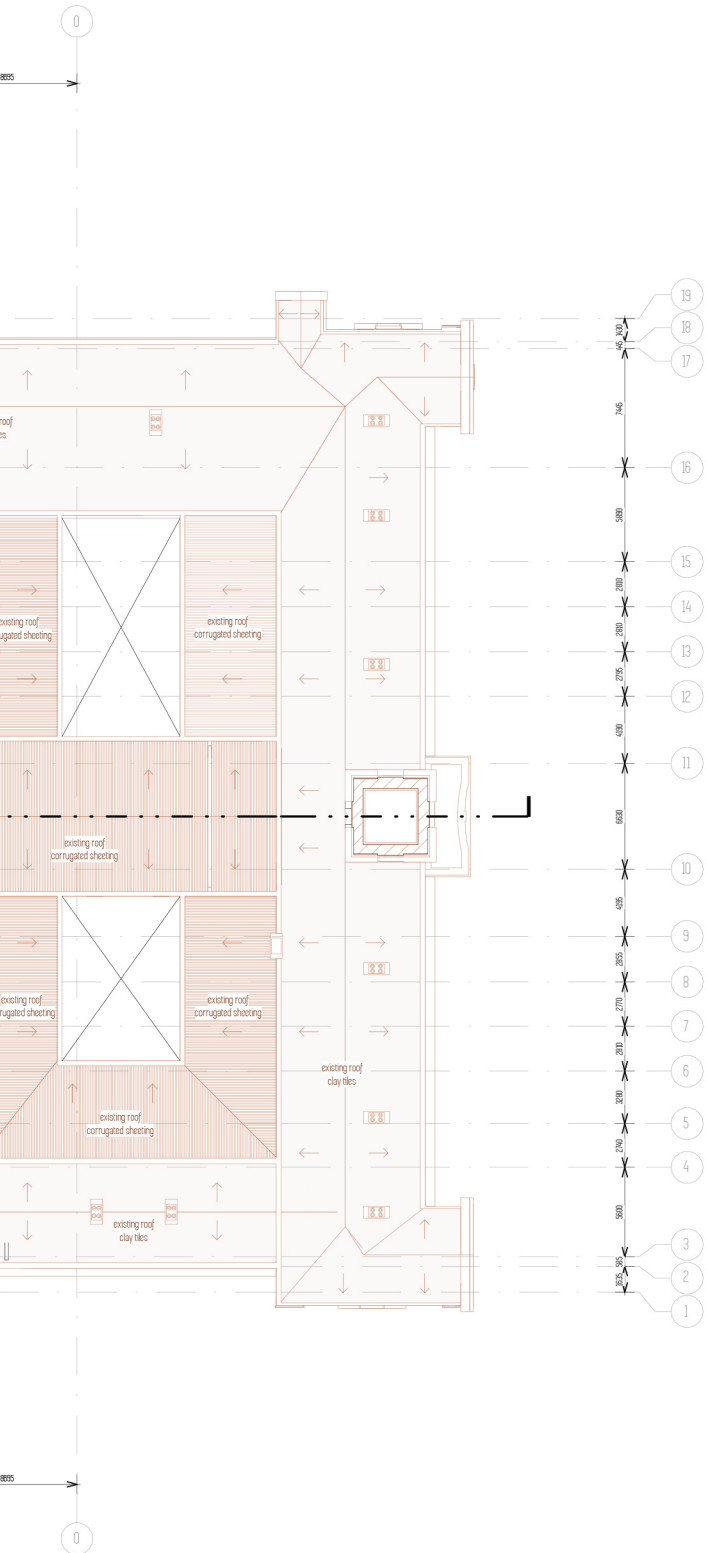



Roof Plan

1:200




PURPOSE OF ISSUE
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PROJECT
Expansion and adaptation of NALN

TITLE
Roof Plan

CLIENT
NALN

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| SCALE (@ A1) | PROJECT NUMBER |
|---|---|
| 1 : 200 | 15 |

| DRAWING NUMBER | REV |
|---|---|
| A107 | |


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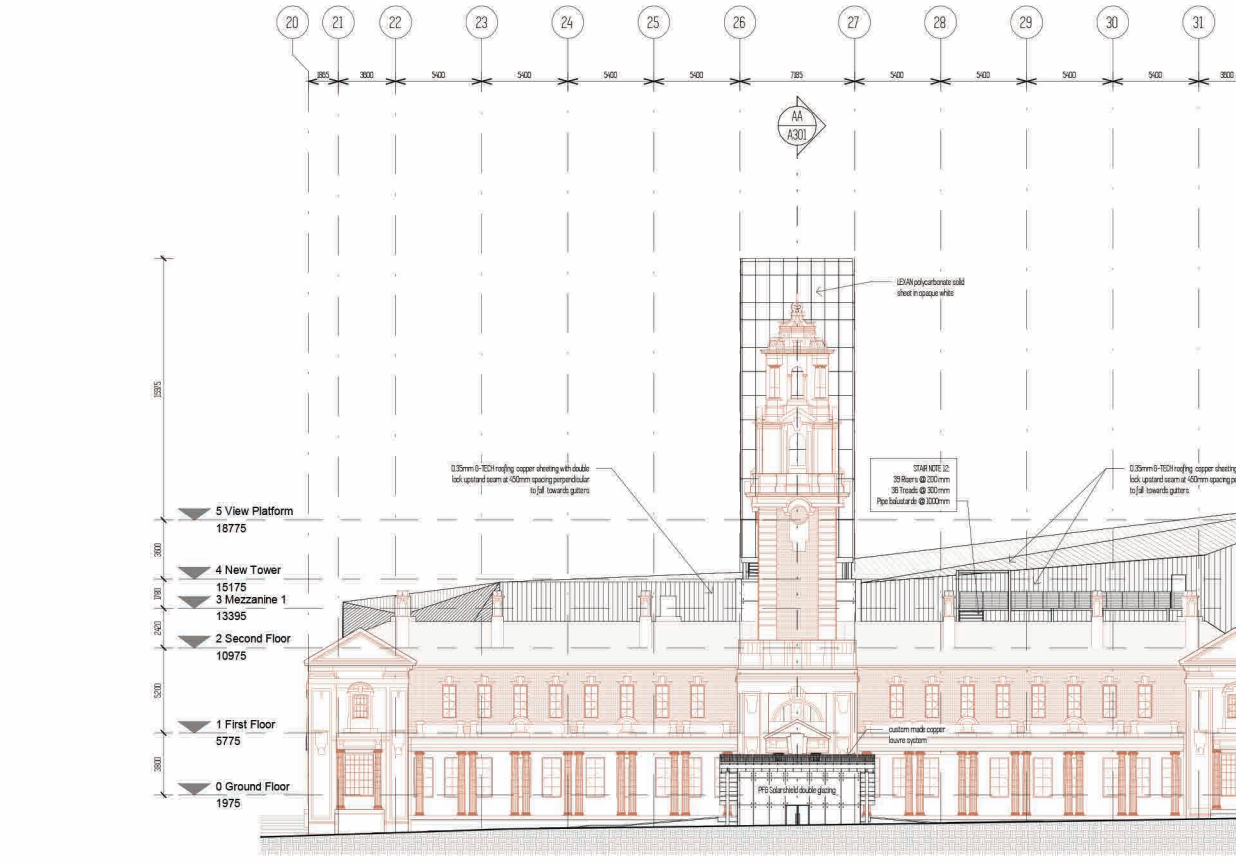
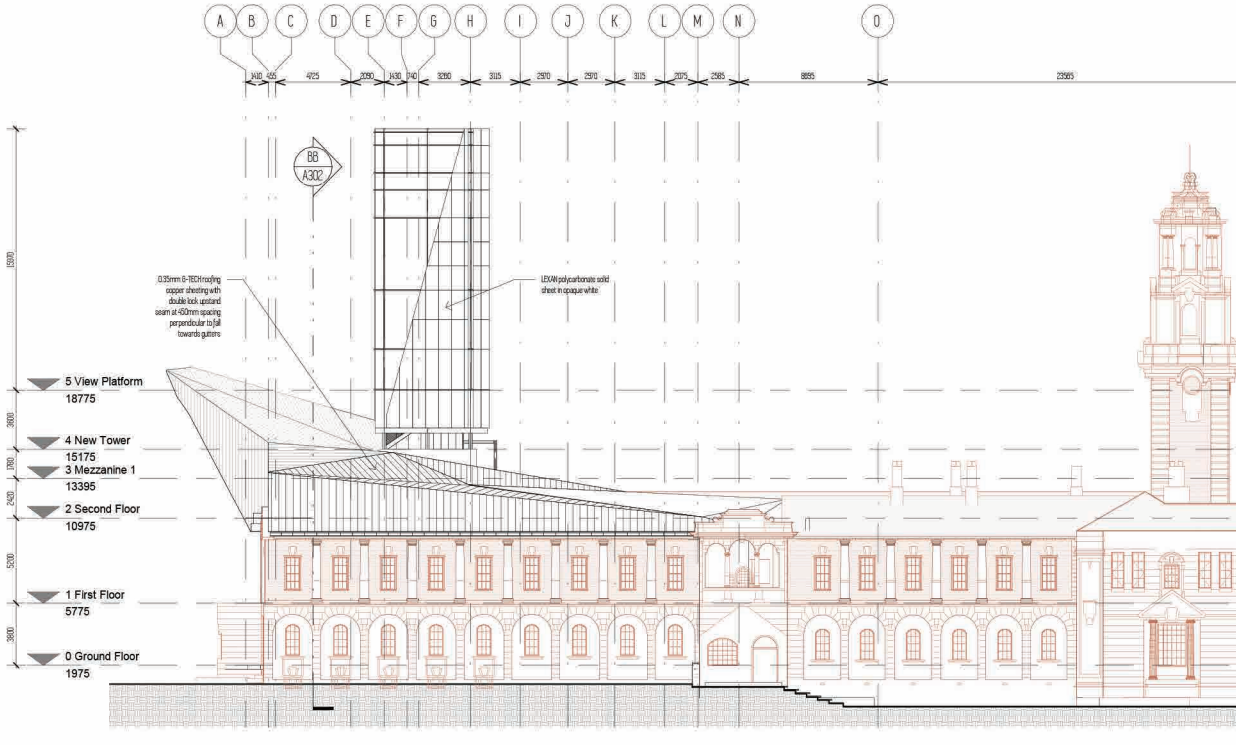


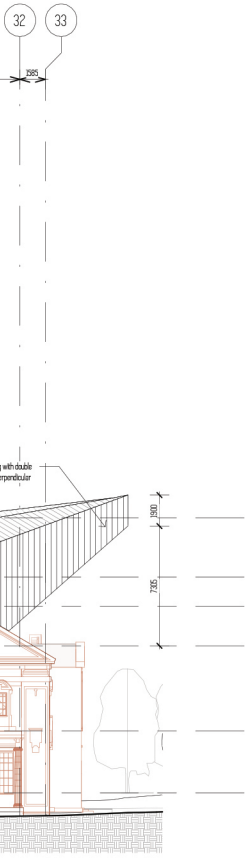

East Elevation

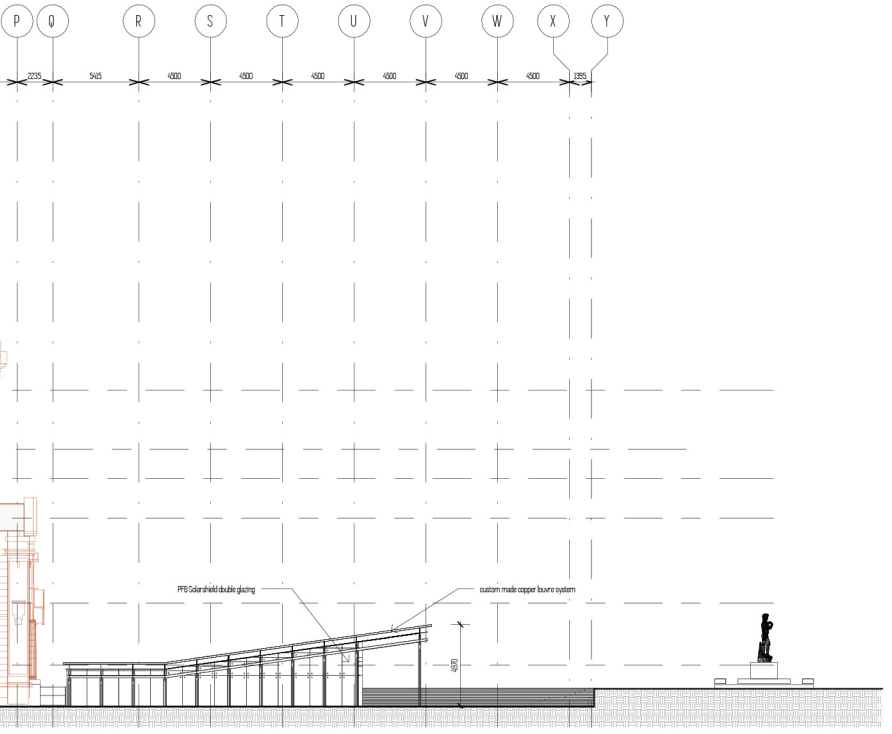
1:200




South Elevation

1:200




PURPOSE OF ISSUE

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PROJECT

# Expansion and adaptation of NALN

TITLE

# East Elevation & South Elevation

CLIENT

NALN

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|---|---|
| 1 : 200 | 15 |

| DRAWING NUMBER | REV |
|---|---|
| A201 | |


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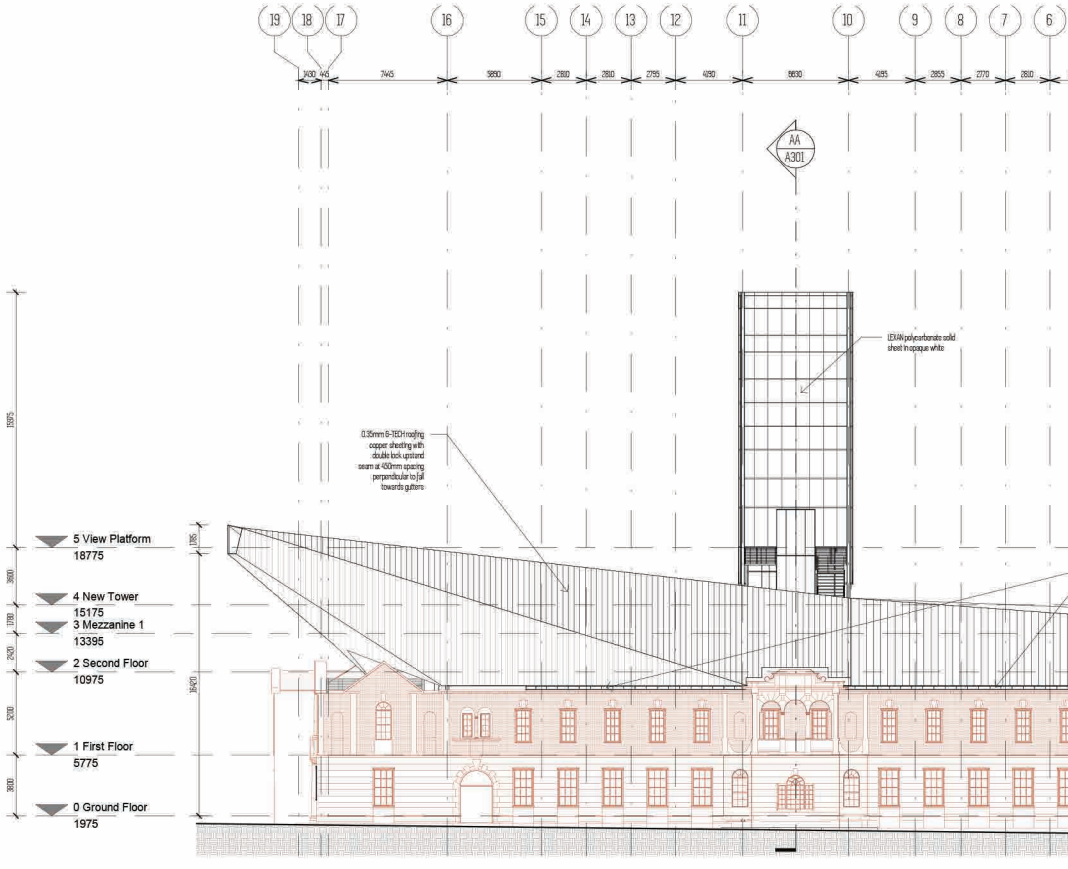



West Elevation

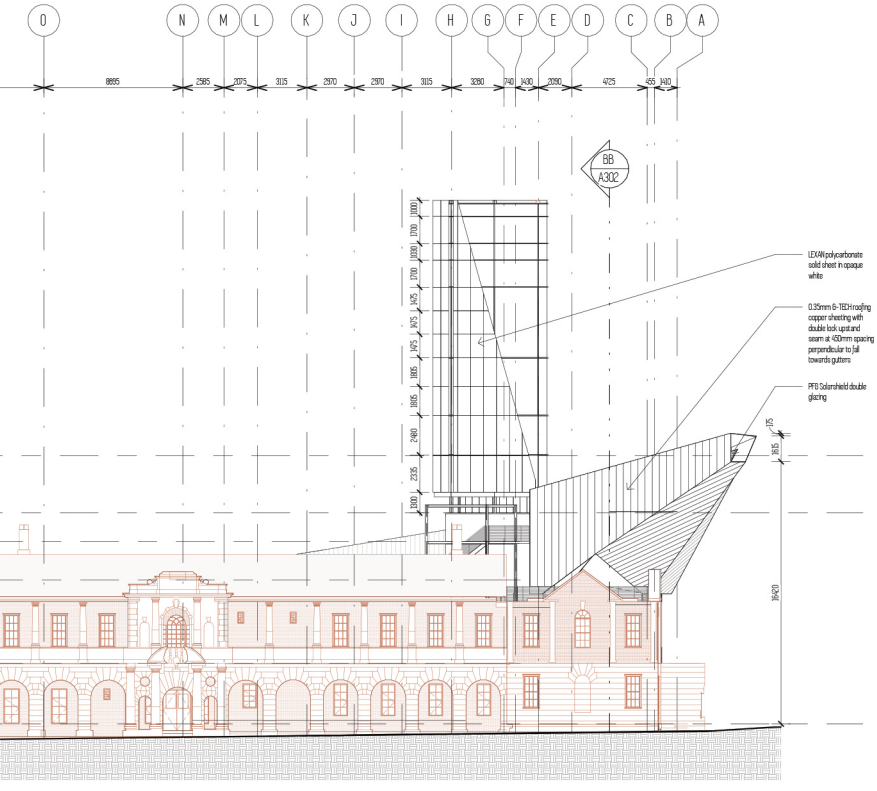
1:200




North Elevation

1:200

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PROJECT

# Expansion and adaptation of NALN

TITLE

## West Elevation & North Elevation

CLIENT

NALN

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|---|---|
| 1 : 200 | 15 |

| DRAWING NUMBER | REV |
|---|---|
| A202 | |


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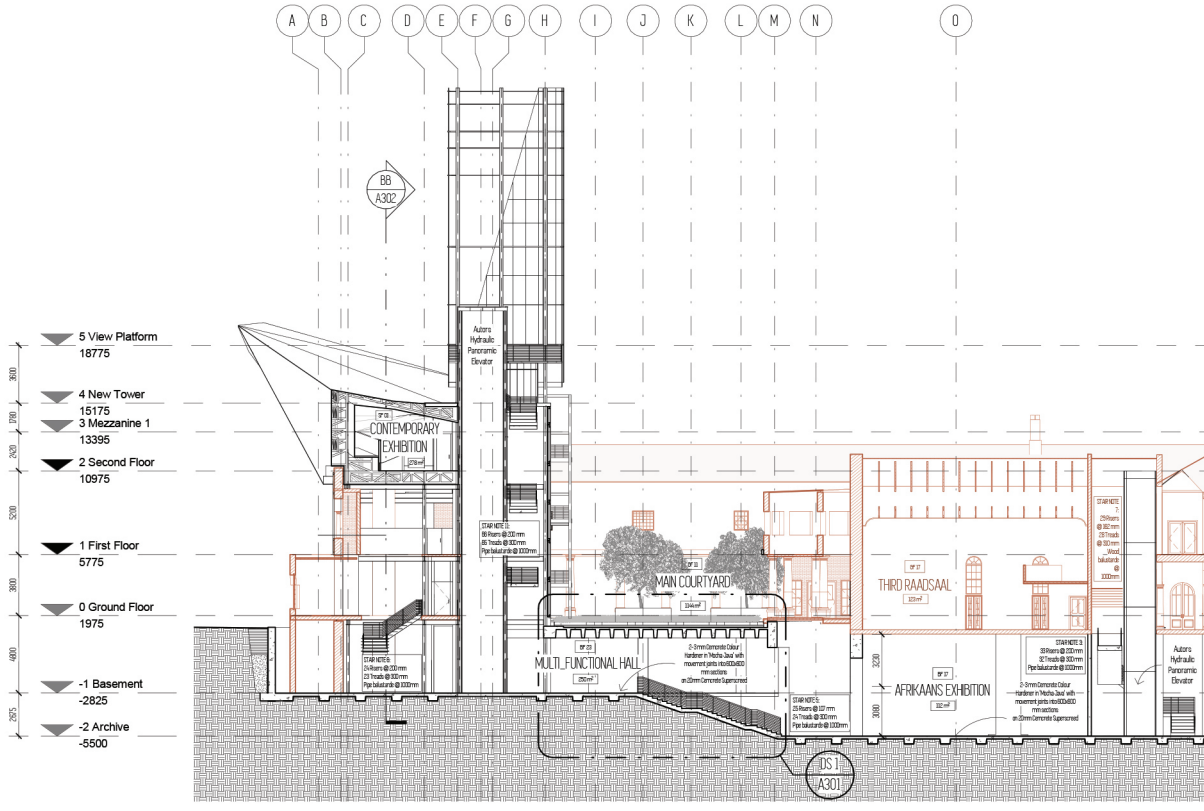
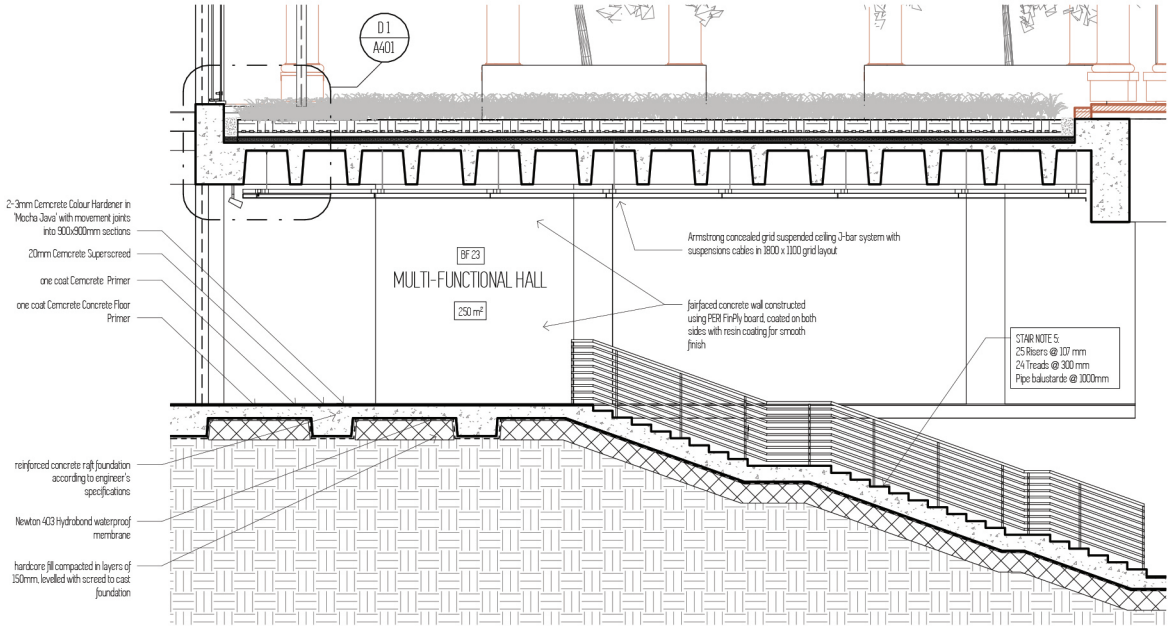



Section 1

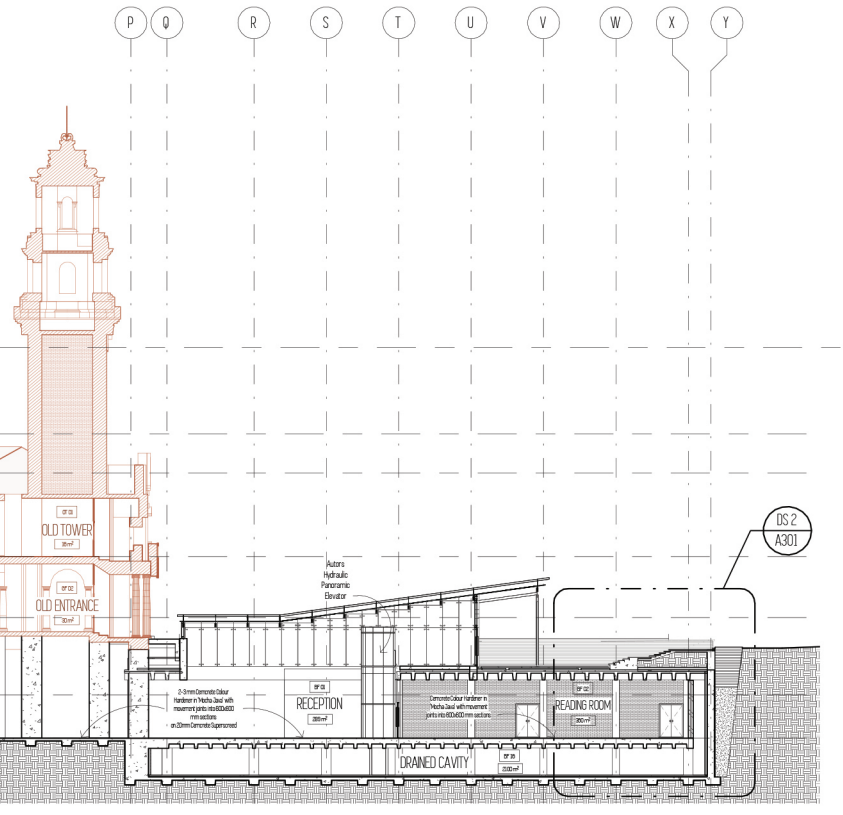
1:200

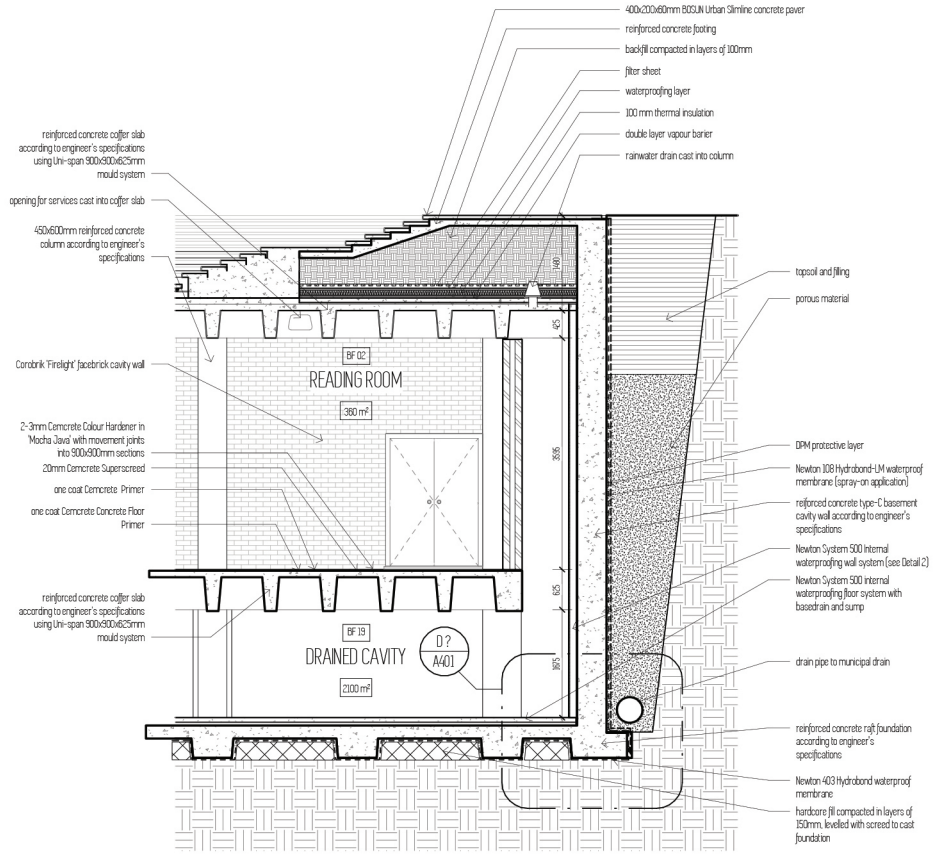



DS 1 - Detail Section 1:

1:50

Section through green roof and underground exhibition space




DS 2 - Detail Section 2:

1:50

Skins section of archive retaining wall and waterproofing

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PROJECT

Expansion and adaptation of NALN

TITLE

Section AA & Detail
Section 1 & Detail
Section 2

CLIENT

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| DRAWING NUMBER | REV |
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| A301 | |


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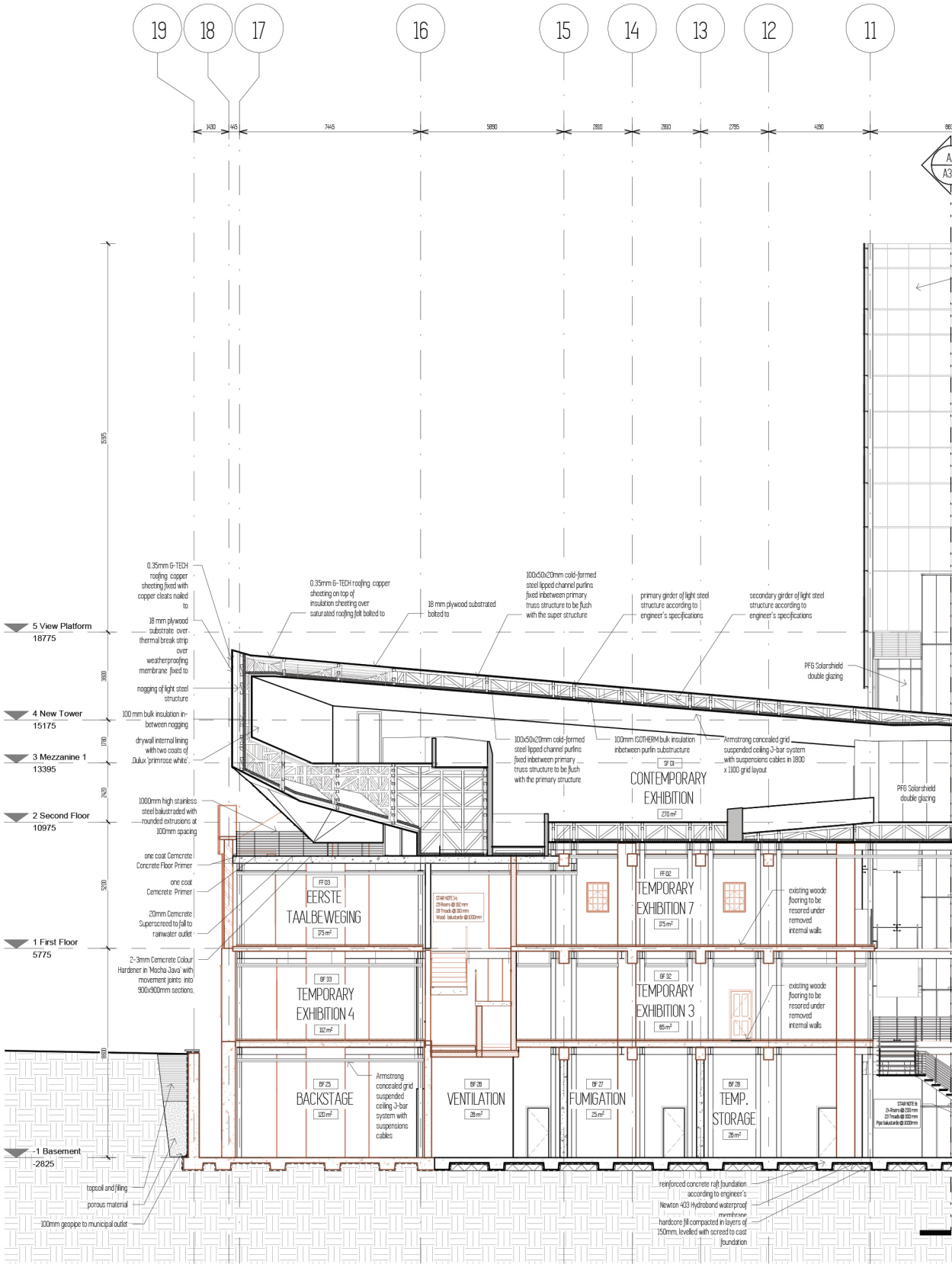
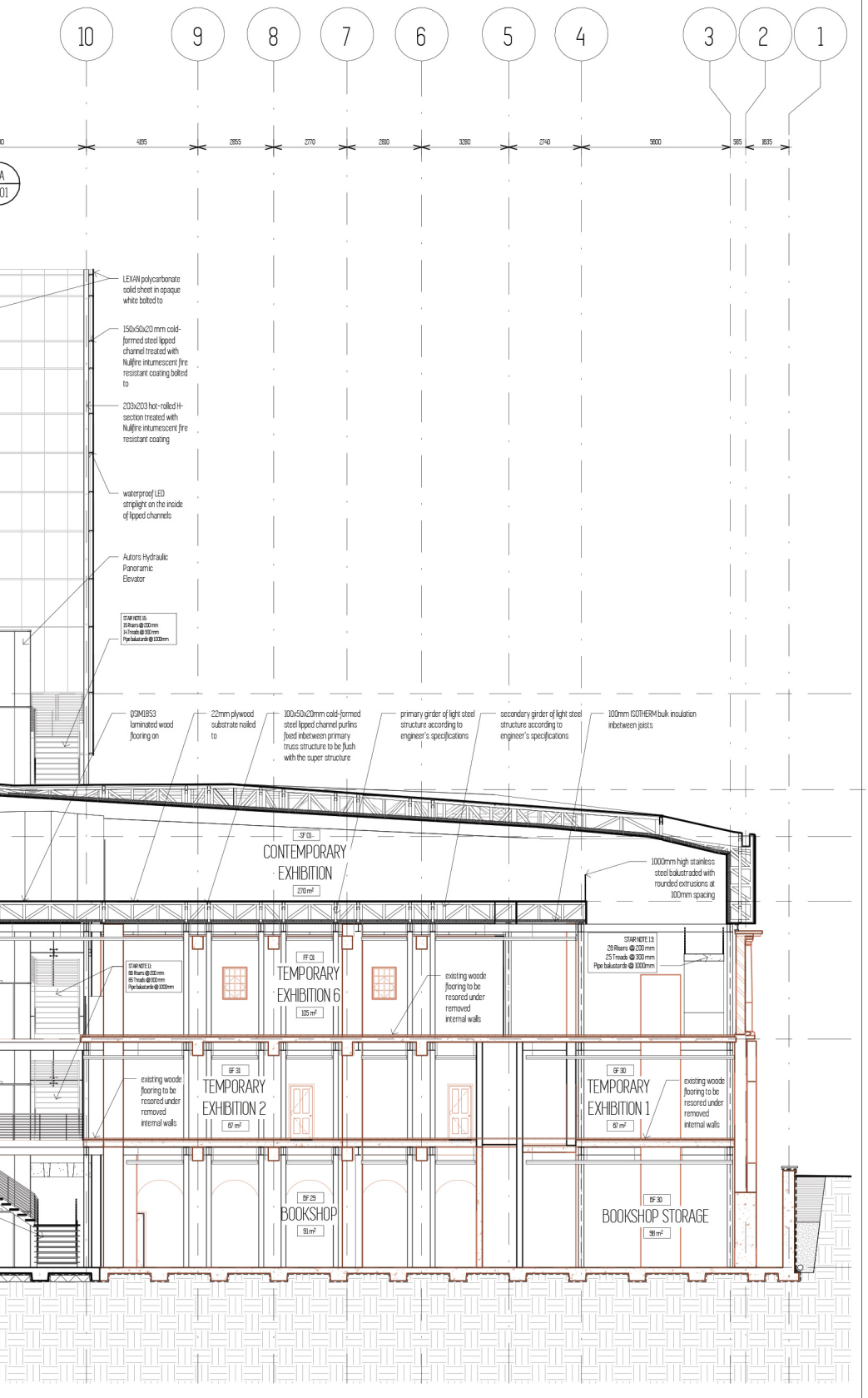

19
18
17
16
15
14
13
12
11
1430
445
7445
5890
2810
2810
2795
4250
5 View Platform
18775
4 New Tower
15175
3 Mezzanine 1
13395
2 Second Floor
10975
1 First Floor
5775
-1 Basement
-2825
5595
3600
1700
2420
5200
1800
0.35mm G-TECH roofing copper sheeting fixed with copper cleats nailed to
18 mm plywood substrate over thermal break strip over weatherproofing membrane fixed to
nogging of light steel structure
100 mm bulk insulation in-between nogging
drywall internal lining with two coats of Dulux 'primrose white'.
1000mm high stainless steel balustraded with rounded extrusions at 100mm spacing
one coat Cemcrete Concrete Floor Primer
one coat Cemcrete Primer
20mm Cemcrete Supersceed to fall to rainwater outlet
2-3mm Cemcrete Colour Hardener in 'Mocha Java' with movement joints into 900x900mm sections.
0.35mm G-TECH roofing copper sheeting on top of insulation sheeting over saturated roofing felt bolted to
18 mm plywood substrated bolted to
100x50x20mm cold-formed steel lipped channel purlins fixed inbetween primary truss structure to be flush with the super structure
primary girder of light steel structure according to engineer's specifications
secondary girder of light steel structure according to engineer's specifications
PFG Solarshield double glazing
100x50x20mm cold-formed steel lipped channel purlins fixed inbetween primary truss structure to be flush with the primary structure
100mm ISOTHERM bulk insulation inbetween purlin substructure
Armstrong concealed grid suspended ceiling 3-bar system with suspensions cables in 1800 x 1100 grid layout
SF 01
CONTEMPORARY EXHIBITION
270 m²
PFG Solarshield double glazing
FF 03
EERSTE TAALBEWEGING
175 m²
STAIR NOTE 14:
29 Risers @ 192 mm
28 Treads @ 310 mm
Wood balustrade @ 1000mm
FF 02
TEMPORARY EXHIBITION 7
175 m²
existing woode flooring to be resored under removed internal walls
BF 33
TEMPORARY EXHIBITION 4
112 m²
BF 32
TEMPORARY EXHIBITION 3
65 m²
existing woode flooring to be resored under removed internal walls
BF 25
BACKSTAGE
120 m²
Armstrong concealed grid suspended ceiling 3-bar system with suspensions cables
BF 26
VENTILATION
28 m²
BF 27
FUMIGATION
25 m²
BF 28
TEMP. STORAGE
28 m²
STAIR NOTE 15:
24 Risers @ 200 mm
23 Treads @ 1000 mm
Pipe balustrade @ 1000mm
topsoil and filling
porous material
100mm geoppe to municipal outlet
reinforced concrete raft foundation according to engineer's
Newton 403 Hydrobond waterproof membrane
hardcore fill compacted in layers of 150mm, levelled with screed to cast foundation




PURPOSE OF ISSUE
Issued for information

PROJECT
Expansion and adaptation of NALN

TITLE
Section BB

CLIENT
NALN

| DRAWN BY | CHECKED BY | DATE |
|---|---|---|
| Author | Checker | 10/10/18 |

| SCALE (@ A1) | PROJECT NUMBER |
|---|---|
| 1 : 100 | 15 |

| DRAWING NUMBER | REV |
|---|---|
| A302 | |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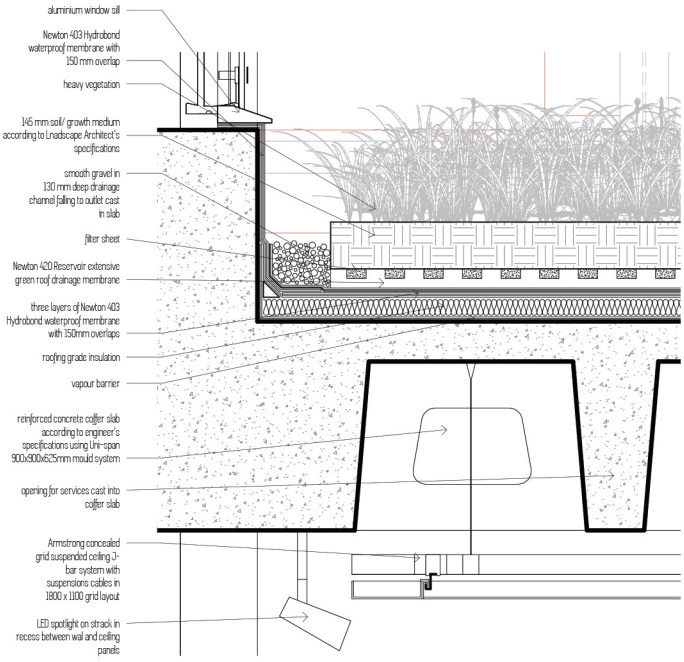
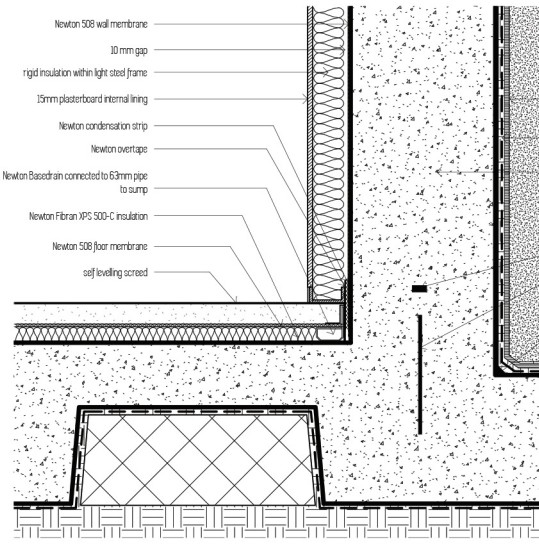



## Detail 1

1:10

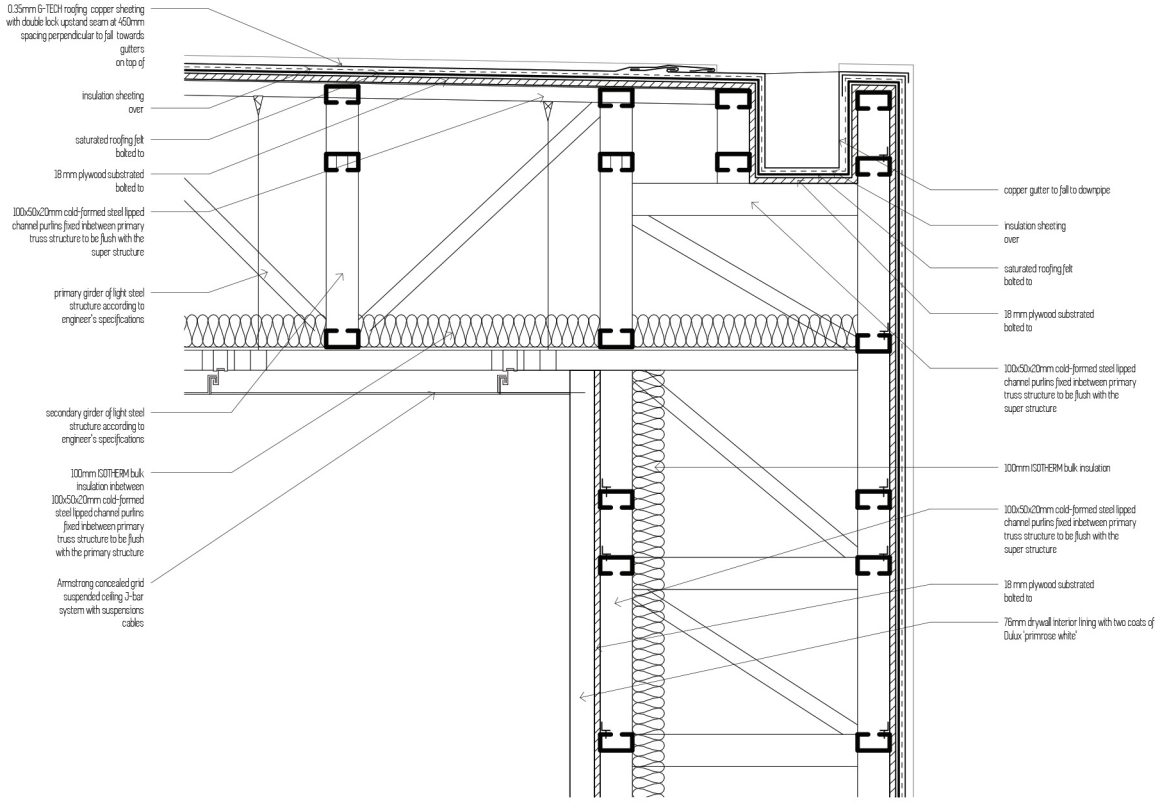
Green roof waterproofing and concealed grid suspended ceiling




## Detail 2

1:10

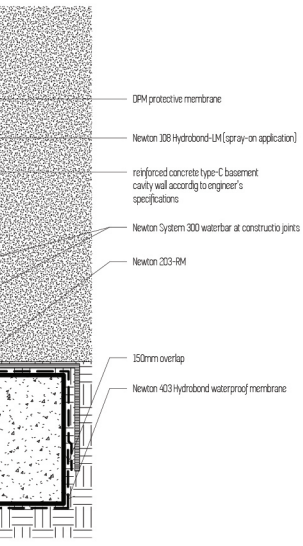
Newton 500 Type C basement integrated fllor and wall waterproofing system

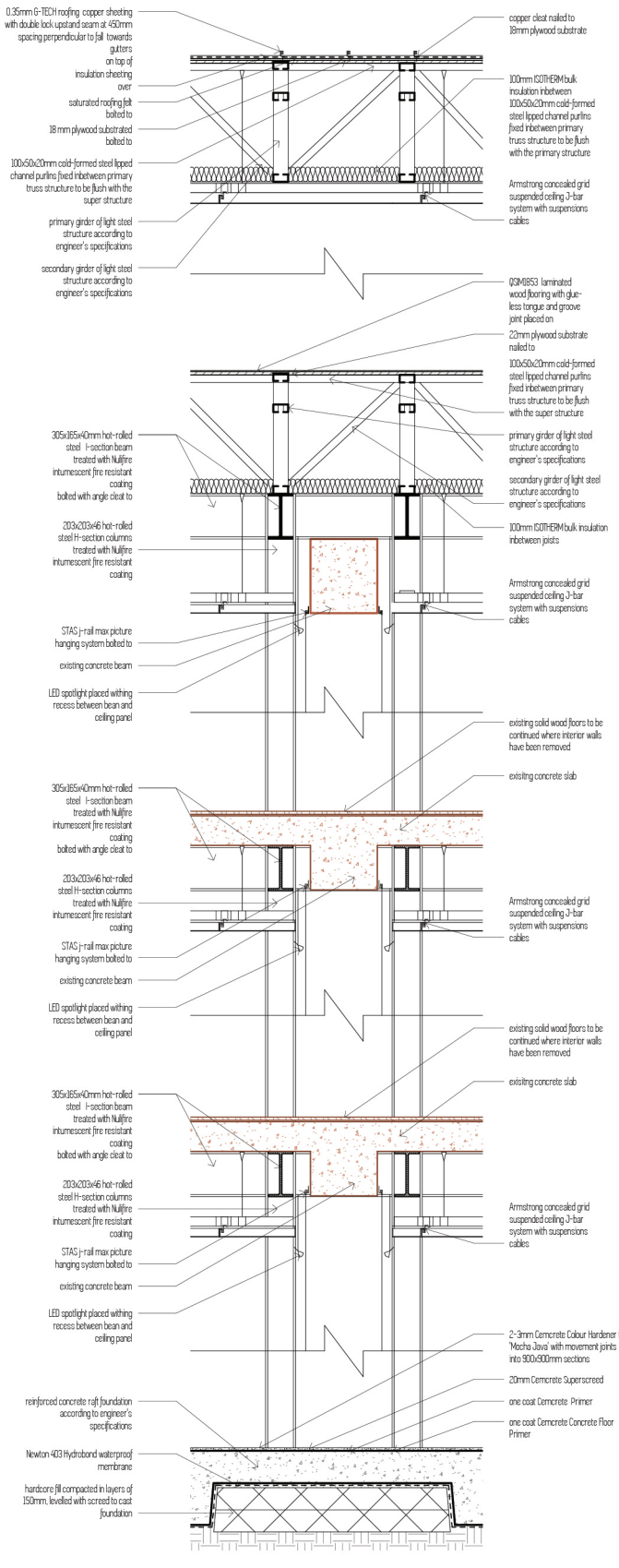



## Detail 1

1:10

Copper roof built-in gutter detail




Detail 3

1:20

typical detailing of new exhibition wing structure and new steel grid structure within exisitng building

PURPOSE OF ISSUE

Issued for information

PROJECT

# Expansion and adaptation of NALN

TITLE

## Details

CLIENT

NALN

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