An architecture of meaning

The design of the headquarters for the National Department of Home Affairs

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Submitted in partial fulfillment of the requirements for the degree of Magister in Architecture (Professional) in the Faculty of Engineering, Built Environment and Information Technology

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The project explores the expression of meaning in architecture against the backdrop of the City of Tshwane Metropolitan Municipality as post-apartheid capital city. The architectural aim of the project is the consolidation of the National Department of Home Affairs and the design of the headquarters of this department.

The project starts with a brief exploration of the context of a post-colonial and post-apartheid city, and the aims and identity linked to an African democracy in the context of multiple cultural identities. The search for a national identity is linked to the existential question of 'being', which is related to an experiential understanding of physical surroundings.

Case studies include recent public buildings that form part of an era of searching for identity and contribute to the discovery of an underdeveloped element of multi-sensory experience in recent architectural projects related to the new democratic government.

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Index

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List of Figures

Chapter 1. Introduction

“If all buildings inevitably carry meaning, then we should do well to see how they do it. At the very least, that will help us to understand all buildings better. And if our buildings are going to symbolise anyway – despite our best (or worst) intentions – then an understanding of how they do so may help us design them to do it better.” (Broadbent. A, p125)

1. Introduction

"I experience myself in the city, and the city exists through my embodied experience. The city and my body supplement and define each other." (Palasmaa, 2005, p.26)

Man is constantly engaged in a process of 'placing' himself in the world. On a subconscious level man is continually influenced by his physical environment, relating himself to the world around him. Heidegger (in Sharr, 2007, p.8) talks of reminders in the environment that allow people to place themselves in a broader context.

Man does, however, manipulate his environment. Consciously and subconsciously man shapes the space that he inhabits. Palasmaa (2005, p.8) states that architecture deals with the question of man's being in the world; relating the question of human existence in space and time. Man writes into the built environment something about who he is, when he is, and how he is in that environment. The aspirations and ideals of man are reflected in the environment that he creates (Sharr, 2007, p.10).

This suggests a reciprocal relationship between man and his environment. Man locates himself in the bigger picture, he then configures space, consciously or subconsciously, to reflect the question of his existence and his location in the bigger picture. He then relates himself to his created environment and reinterprets his location in the world. This may lead to a further reconfiguration of space and repetition of the same process.

Sharr (2007, p.9) states that the inhabitant's life is 'configured' by the building. It is this potential of architecture (or buildings) to contribute to man's awareness of his existence, that Heidegger finds most important (Sharr, 2007, p.35). This relationship, man's awareness and understanding of his environment, is based on the experience, the perception and evaluation of that perception, of the building or environment. The significance of a built object (or thing) lies in the fact that its presence can influence the 'parameters' of people's daily lives (Sharr, 2007, p.48). As people engage in daily life and are affected by built 'things' they are reminded of their existence and their place in the world.

Palasmaa (2005, p.22) also focuses on the importance of the 'physical, sensual and embodied essence of architecture'. He criticizes the emphasis on the intellectual dimension of architecture and talks of weakened participation in the world and architecture being detached from cognitive and social connection.

Architecture is significant to the relation of man to the world, but it is in the experience of architecture that its significance lies, not in an intellectual conceptualization. Powel (2000, p.16) writes that architecture is not simply about appearances, but about substance. It is a holistic construct, an interaction of aesthetics, politics, finance and symbolism, which provides an opportunity for man to appreciate his existence in a larger context.

In post-apartheid Pretoria this awareness of existence, of the right to existence, and a new relationship between man in time and space is extremely significant. Here the built 'thing' needs to reflect a new awareness of man's place in the world.

Figure 1: Dominance of government buildings in Brasilia

Figure 2: Dominance of government structures in Washington

2. Background

South Africa has a history rich with opposing political factions, territorial groupings and different spatialities of power. Mabin (2009, p.3 - 5) describes how the various attempts throughout history to foster unity were expressed in the sharing of capital functions and spaces. He states that Pretoria was founded as a new capital with the purpose of unifying diverse sociopolitical factions. In line with this conciliatory agenda, the main symbol of National Government in the country, the Union Buildings, do not dominate the city in the same way that similar buildings in Washington and Brasilia do. Mabin (2009, p.14) interprets this separation of symbolic sites from the urban fabric as an absence of 'monolithic dominance', which indicates a different relation between state power and the populace. This understated democratic relation between political power and the voice of the citizenry is a strong characteristic of South African culture.

After the elections in 1994 the debate concerning the location of the capital city was renewed. Strong arguments were made for the suitability of Cape Town as 'mother city' and Johannesburg as the seat of economic power. Indeed Provincial Government moved

Figure 3: Locality of South Africa - leading African capital

Figure 4: Schultes' plan linking east and west Berlin

to Johannesburg shortly after 1994. Eventually the decision was made that Pretoria would remain the administrative capital and in 2001 Cabinet took the decision that National Government headquarters should remain in Pretoria's inner city. This decision was followed by the requirement that the Department of Public Works should develop a framework for the improvement of the physical environment within which these headquarters would function (Mabin, 2009, p.19). The urban design framework which was commissioned, now known as Re Kgabisa Tshwane, was aimed at the consolidation of severely fragmented National Government Departments around a proposed system of open spaces. Although the program includes refurbishment of properties owned by the Department of Public Works, it entailed the creation of a number of new buildings. As part of the urban design framework a set of architectural guidelines was developed. The approach included a combination of the expression of a local identity and context as well as the expression of its identity as leading African capital (Richards, 2005).

3. Capital cities

Literature suggests that the continued success of a capital city relies on the use, restructuring and re-interpretation of symbolic sites. Thus it is in the expression and concretization of various sets or systems of meaning in the urban fabric that the symbolic significance of a national capital lies. The capital city has as its function the representation of the nation's ideals. Scott Campbell (quoted in Shatkin, 2006, p.577) describes capital cities as 'symbolic theatres' for national identities. They contain the collective memory of the people and provide the stage for ceremonies and events; they contain spaces of gathering and spaces of representation. The capital is a place that should be infused with meaning, even while it is shaped by history and political events, it should influence and reinforce ideas.

South Africa underwent a major change in sociopolitical ideology in 1994. It was inevitable that there would follow a time of re-interpretation in cities and their architecture, in some ways similar to that which

Berlin experienced after the fall of the Berlin Wall (Ladd, 1997, p.226). Ladd writes that the city had to acknowledge that the addition of a 'new' group of people had influenced the nation.

The success of Berlin in re-establishing itself as the national capital, was in large part due to the urban design of Axel Schultes and Charlotte Frank who managed to capture the idea and symbolism of re-unification in the urban fabric. The plan located the new centre of government in a part of the city that, by a strip of east-west buildings, symbolically linked sections of what used to be East and West Germany. In addition to this, the mixed use urban character of the plan was seen as accessible and therefore a democratic space. Ladd describes this design as an 'unmistakable urban statement'. The presence of national government headquarters in the capital and the concretization of meaning in the urban fabric are key factors in the success of Berlin to function as national capital city in a reunified country. These are tools that are also available to the National Government of South Africa.

4. Problem statement

Freschi (2006) states that the South African government has not attempted to use the construction of large-scale public buildings to re-brand nationalism. He states that the government has simply appropriated the buildings of the previous regime, 'papered over or removed the more odious reminders of the past".

It is the point of departure of this study that it is necessary that new meanings should be introduced to urban fabric, especially in the capital city. In the context of a country where the establishment of a constitution and democratic government has so directly affected the lives of such a large percentage of the population, it is essential that a physical manifestation of that change be incorporated into the physical world to which people relate on a day-to-day basis.

Within the historic context of a city that is not characterised by 'monolithic' dominance by government structures, it is not the intention to establish an architectural language or stylistic expression of monumental proportions in the tradition of public buildings of previous eras. Instead the intention is to explore ways in which to inscribe such ideals as democracy as new layers of meaning into the urban fabric through the use and functioning of the public buildings.

5. Research question

This study aims to undertake the design of a National Government building in the inner city. The main aim of the study is to explore the expression of meaning in government buildings, and specifically in the context of the capital city.

The research is separated into three main areas, each of which is then divided into further main categories:

- Identity
  - The question of being
  - Multiple identities
  - Democracy

- Function
  - National Government
  - Department of Home Affairs

- Expression of meaning
  - Symbolism, metaphor and allegory
  - Experiential space
  - How an organization becomes legible in a building

6. Methodology

Wilson (2002) states that methodology provides the philosophical background and approach to the research method. This section is therefore aimed at providing firstly the philosophy underlying the approach to the research question and thereafter giving a short description of the methods to be employed in this study.

i. Phenomenological approach

As stated earlier in this document there is a postulate of a reciprocal causal relationship between people and their physical environment, an interaction between that which is shaped and influenced by man and man being influenced in turn by that environment. People are constantly orientating themselves in the world and in a process of understanding the world.

According to Wilson (2002) a phenomenological approach requires that one seeks to discover the world 'as it is experienced by those involved in it'. The emphasis is on the understanding of another person's experience and the meaning that people attach to experience. It focuses on a cognitive awareness and encounter of objects as well as more abstract constructs (Toadvine, et al., 2005).

ii. Qualitative research methods

Phenomenology falls into the category of qualitative research as it is essentially dealing with non-quantifiable elements such as experience, encounter, and meaning. Wilson (2002) states that one is 'urged to get as close as possible' to people's experience.

Observation

Both Wilson (2002) and Trochim (2006) describe observation as a fundamental method of data collection within the phenomenological approach. Within this study observation includes the researcher as a part of the participant population. The experience and understanding of the space will be, at least partially, informed by the experience of the researcher.

Case studies

A case study is an intensive study of a specific individual or specific context. Trochim (2006) states that there is no single scientific way to conduct a case study.

7. Conclusion

The first step of the study is to place the project within a context. To this end an urban design framework was developed for the inner city of Pretoria. The framework focuses on flexibility of use patterns throughout the city over time, in particular on the existence of experiential fields between points of social, cultural, political and / or economic significance. The framework will be discussed in detail in the next chapter.

The following chapters will deal with the research questions mentioned above and will be divided into a literature study, precedent study and site analysis. The conclusions will inform the design.

The design will further be influenced by environmental and other technical aspects which will be discussed in the design development section. A technical investigation will conclude the project stage.

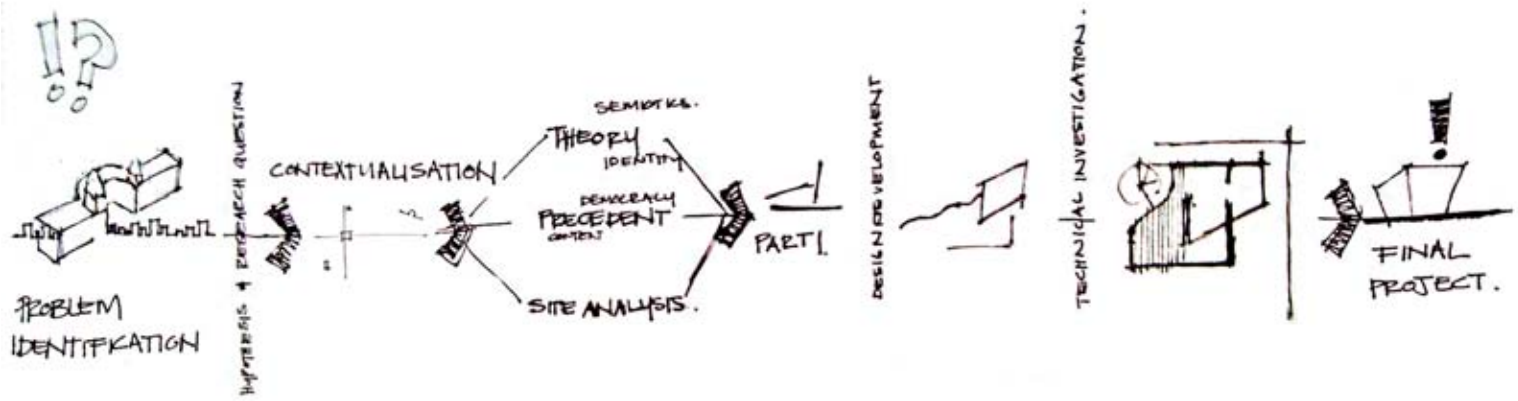
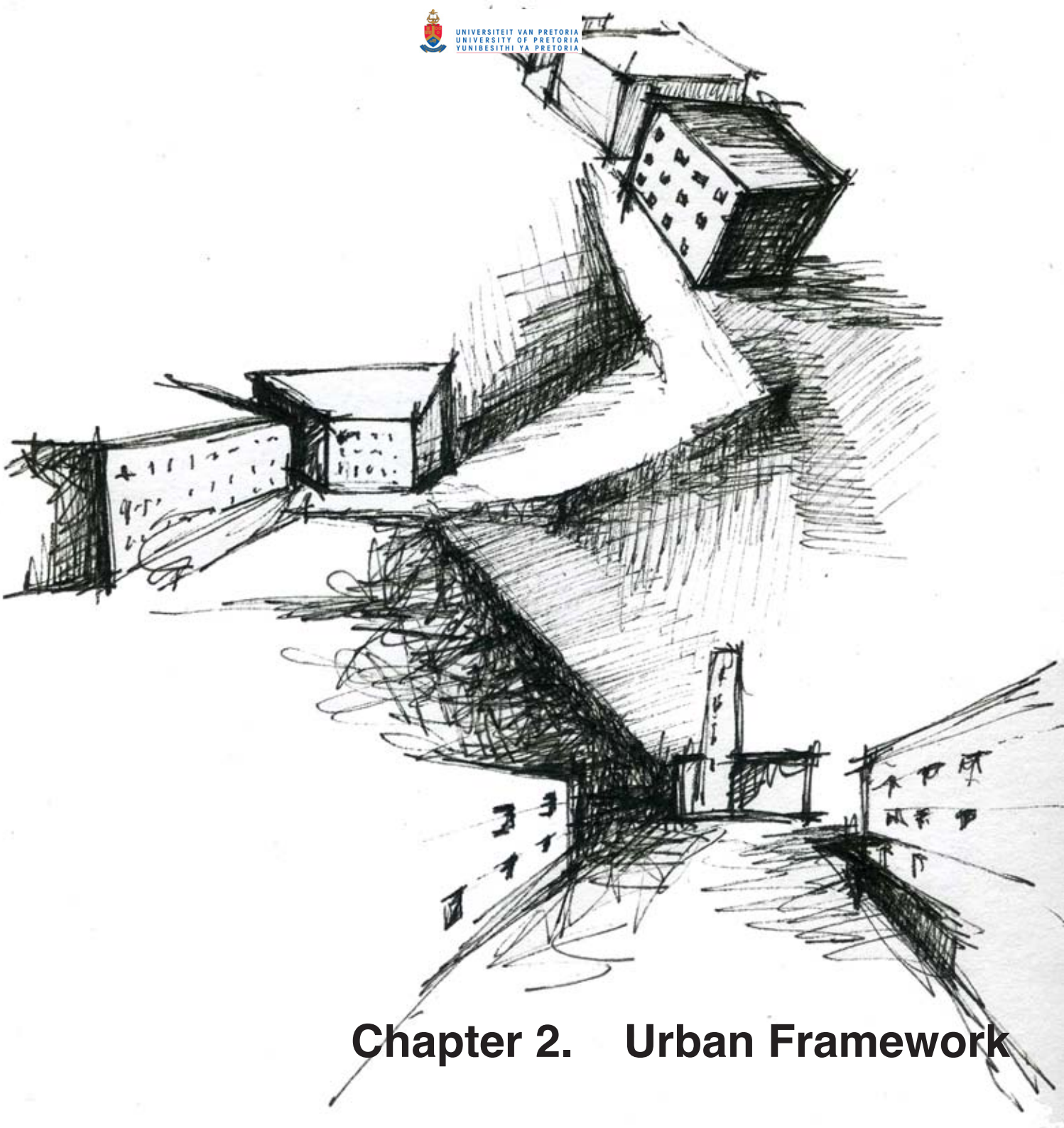


Figure 5: Process diagram



Chapter 2. Urban Framework

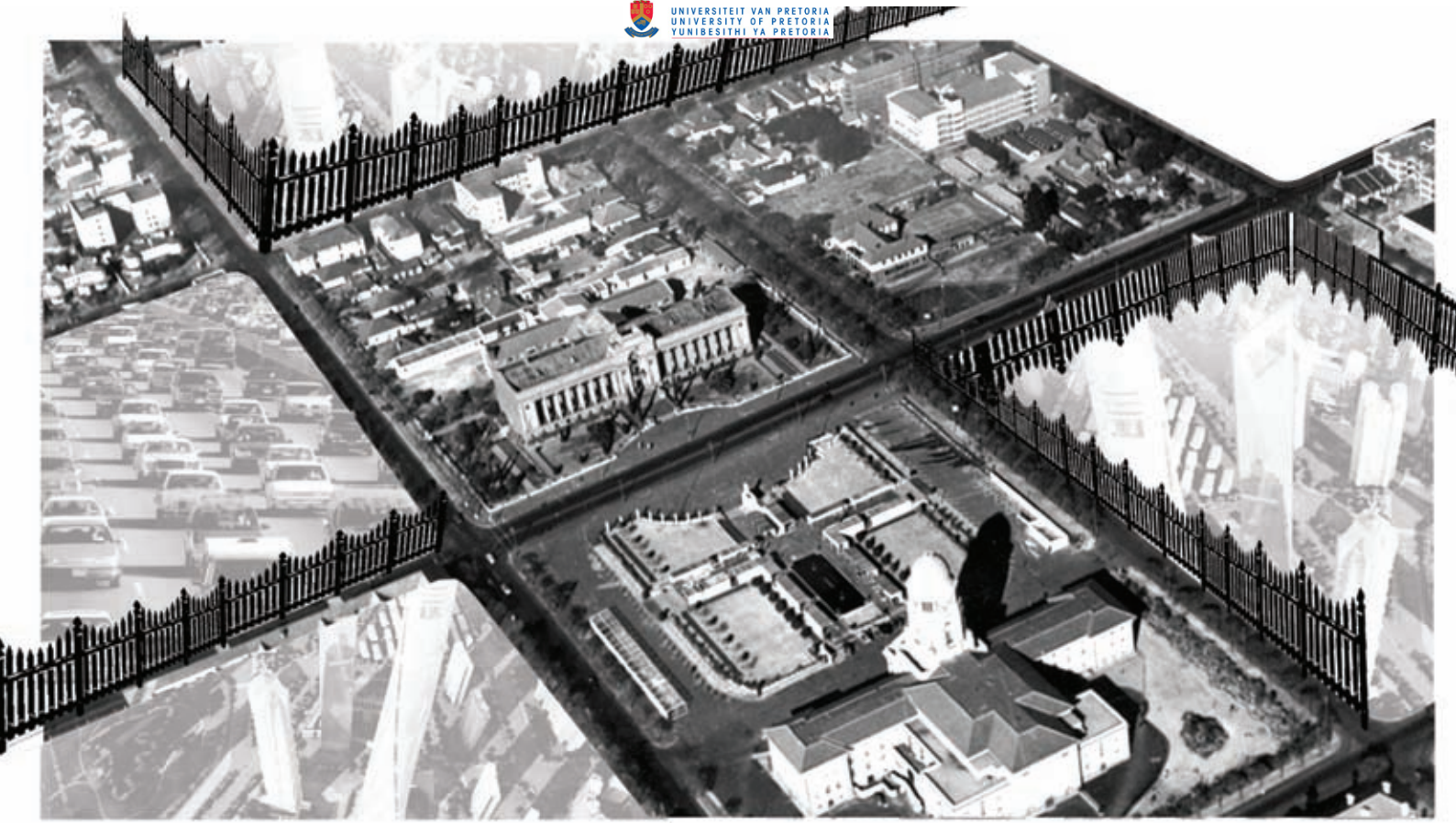


Figure 6: Inevitable undesired urban environment resulting from prescriptive frameworks

1. Introduction

This chapter will firstly discuss the urban framework within which the project is located, secondly the analysis of the project site and finally the mandate and requirements of the client.

2. Urban Framework

At the start of the creation of this urban framework a question was raised concerning the effectiveness and suitability of the creation of a large-scale prescriptive urban intervention. A number of such frameworks has been developed for Pretoria in the recent past, none of which has been implemented. Additionally, the intentions stated in these frameworks cannot be seen in current works and constructions in the city.

The decision was therefore made to re-evaluate the theoretical background to the question of the urban framework, in order to adjust the approach to current thinking in this regard. To this end a brief survey was done with regard to the history and development of urban design as well as a number of recently published theories, which then informed the approach and underlying philosophy of the 'BCe1' theory, which was developed as part of this study (including the following projects: Infratecture, Rejoin, and Historic recovery_Urban recovery).

i. A brief tale of urban awakening

The term 'urban design' was coined in the 1950s. The field emerged as a response to the inadequacies and limitations of the 'philosophies and design paradigms' of architecture and city planning during the Modern era. At this stage in history a strong 'division' had developed between the theories of architecture and planning. Elements that are now ascribed to the field of urban design had previously been an overlap between these professions (Cooper, et al., 2009).

In response to the failure of the Modern Movement to affect social change and the 'inhuman' urban environments it created, a new paradigm of diversity became the focus of urban design. Jane Jacobs was one of the first writers to celebrate the 'real' city. A wave of theory concerning the expression of complexity in the urban environment followed, e.g. 'Collage city' by C Rowe and 'Complexity and contradiction' by Denise Scott Brown and Robert Venturi. Works such as 'The image of the city' by Kevin Lynch provided a new way of working with the city, and was the first step towards the attempted recreation of diversity in urban environments (Powell, 2000).

As a progression to this way of thinking, Leon Krier started a move towards the recreation of the 'European city'. What attracted designers to the idea of the 'European city' were the symbolic richness, true variety and meaningful articulation of the urban environment (Powell, 2000). The intrinsic use of classical architecture and traditional urban forms was conservative and inevitably led to the failure of this approach to create new / contemporary urban spaces.

More recently there has been a tendency to recall the role of architecture, both as generator and defining element, within the urban environment. The contemporary approaches to urban issues critically consider the three-dimensional space of the city, and accept the need for picturesque composition as one element of the overall composition of the city, a 'holistic interaction of aesthetics, politics and finance' (Powell, 2000). At the same time there is an increasing despair concerning the lack of ability of urban theory to date to construct or contribute to the true complexity of the city. Urban design often seems unable to create the richness, variety and diversity of that which is now considered to be the ideal urban environment.

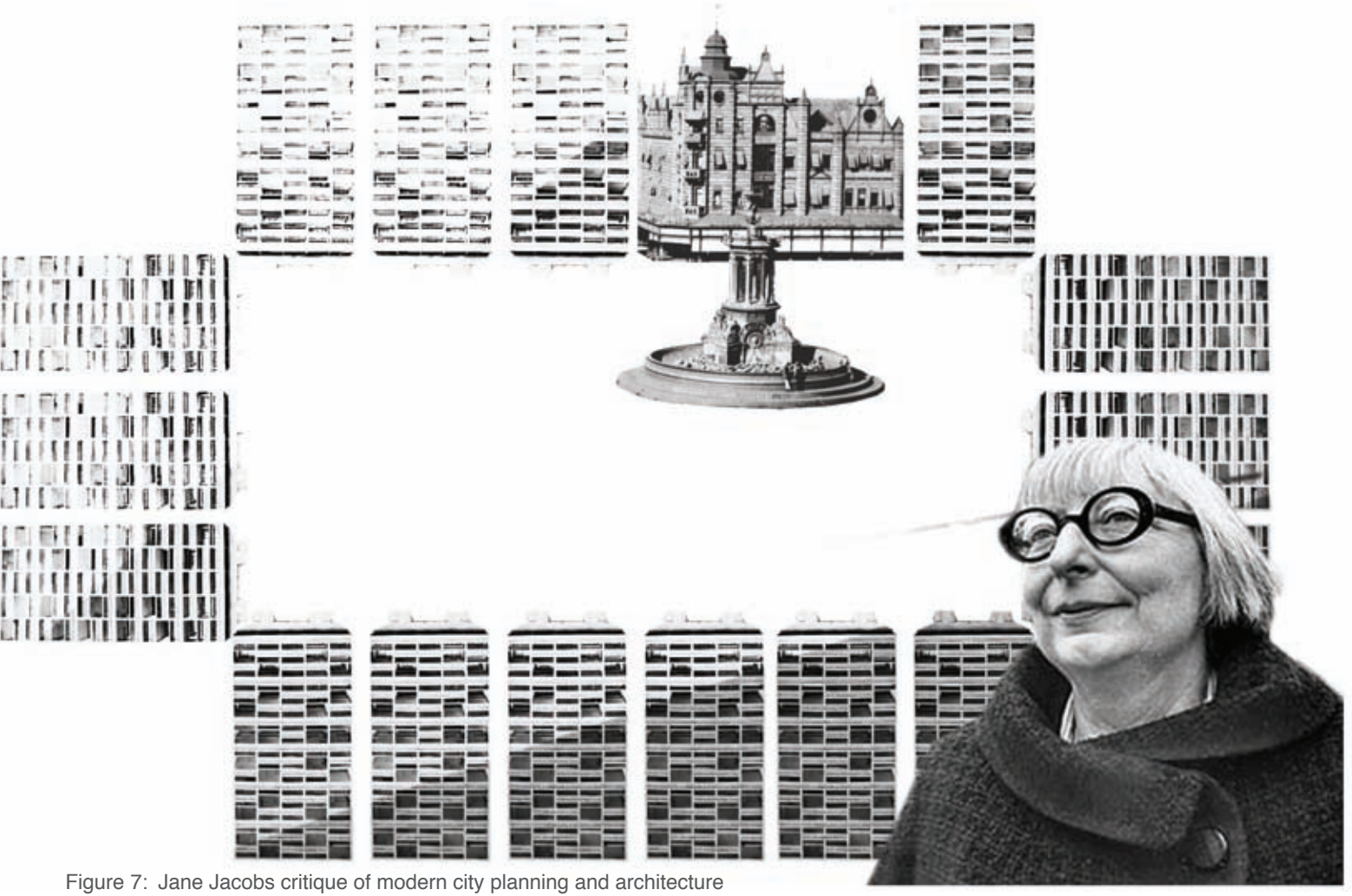


Figure 7: Jane Jacobs critique of modern city planning and architecture

ii. Theoretically urban

The following urban theories form the base of the proposed framework:

Contextualism

Contextualism deals with evolving ideas with regard to building in the city. One of the most important ideas is that the relationship between urban solids (building masses) and voids (the streets and squares), plays a crucial role in defining the character of the city. Nowhere was this more evident than in the traditional city model i.e. European cities which are characterised by well defined, figural public spaces including streets and squares. Contextual theory draws a contrast between the traditional city and modern theories of urbanism (the modern city) arguing that the modern city is compositionally the reverse of the traditional city. "Composed of isolated buildings set in a park-like landscape, the city-in-the-park (modern city) presents an experience which emphasises the building volumes and not the space which the buildings define or imply". (Nesbitt, K.1996:296) The modern city consumes traditional urbanism and its inherent values in the name of progress. Therefore from this standpoint one can argue for a return to traditional city ideas, but this alone will not solve current 'real world' problems. The overall intention of Contextualism is to offer a middle-ground position between an "unrealistically frozen past with no future development permitted, and urban renewal with total loss of the urban fabric". (Nesbitt, 1996, p. 295)

Landscape Urbanism Theory

The theory of Landscape Urbanism refers to the urban environment as 'SCAPE', a term coined by Rem Koolhaas which encompasses all the layers of complexity into one concept of urban structure (Waldheim, 2006, p. 40). More specifically the urban landscape can be referred to as different layers of veins (systems), physical structures and systems, invisible actions and systems and natural elements which serve different purposes but work together as a whole (Durack, 2004, p.3). Ruth Durack states in her essay 'Shrinking Smart the Promises of Landscape Urbanism' that Landscape Urbanism is "…a call to turn the traditional practice of urban design inside out, starting with open spaces and natural systems to structure urban form, instead of buildings and infrastructural systems." (Durack, 2004, p. 3)

Looking at un-activated open space as non-contributory to the urban fabric and labelling spaces as 'urban scars' Landscape Urbanism seeks to utilize these spaces as places of potential which just need 'irrigation' to transform the urban fabric and create peace rather than escape. (Spellman, 2003, p.7) Landscape Urbanism calls for the design of projects rather than objects, requiring the participation of all elements it encompasses, programming horizontal and vertical surfaces instead of creating formal instructive plans (Waldheim, 2006, p.26). Upon the programmed horizontal, public interaction takes place as liquid flow, the liquid takes on the shape of the 'container'. Because the public realm does not have it's own 'form', it takes on the temporal flow of past, present and future transformation (Branzi, 2006, p.20).

Beyond delirious

In his article on the establishment of an urban framework for an area in Belgium, Rem Koolhaas claims that there is a 'rediscovery' of the city, but that there is a simultaneous despair, shared by architects and urban planners, of being able to work with or create the essential elements of the city. In their approach to the creation of the framework they therefore decided, instead of attempting to build a city, to invert their approach and firstly establish which elements they needed to preserve, where they would not build.

The framework thus became a controlled system of void and landscape spaces in which the surrounding urban fabric remained beyond control or guidance. The aim of the approach is that the city becomes defined by its 'empty' spaces (Koolhaas in Nesbitt, 1996, pp.332 – 335).

Designing sustainable cities

"… is diversity equivalent to 'mixing' – mixing of uses, mixing of cultures, mixing of economies? Here again our experience of recently planned 'mixed-use' development suggests not. There seems to be more structure to diverse urban areas than would be implied by a mere mixing of uses or forms" (Cooper, et al., 2009).

This statement supports the approach that that which is essential to 'vibrant' urban environments cannot be forced through the logic of an urban framework. Diversity is generated by a combination of various factors including the functional distribution of elements in space and their correlating perceptual experiences. It is therefore not solely by the creation of spatial properties that a diverse urban environment is created, "… but also upon correlations between a full range of other aspects of perceptual experience" (Cooper, et al., 2009).

The Master Plan is dead (Wolf Prix)

Tschumi and Cheng (2003) state that in developing countries, public authorities do not have the capacity to fund large scale public projects. Thus private sector investors opportunistically develop the city for financial gain.

They theorise that it is up to individual architectural interventions to address the issues around public space.

iii. A problem in four parts

When attempting to identify a problem statement in the context of urban complexity, it is crucial to understand that no urban issue stands in isolation. It would, however, be impossible to consider and unravel, in one attempt, the complete complexity of all things urban. The identification of a problem statement therefore becomes a matter of prioritising that which one can change or at the very least attempt to affect in initial effort.

For the purpose of the construction of the 'BCe1' theory the following issues have been identified:

- Lack of capital city identity
- Ill-defined space
- The city currently contains an overwhelming mix of information that doesn't contribute to the reading of space – it is non-informative, unstructured
- Most of the built fabric is privatised with abrupt thresholds. There is little or no active interaction with space

iv. BCe1

[The BCe1 framework is a theory that has been developed by Group Johan for the purpose of this study (including the works - Infratecture, Rejoin, and Historic recovery_Urban recovery), and is based on the theories discussed above.]

Within the current approach to the creation of urban frameworks, there is a lack of understanding and a disregard for the functioning of space on a human scale. Local complexity and experience of space are not interrogated. The proposed interventions therefore do not address these issues and are unable to contribute towards a constructive urban vision.

We acknowledge that it is not possible to build urban complexity with one spatial intervention. Therefore

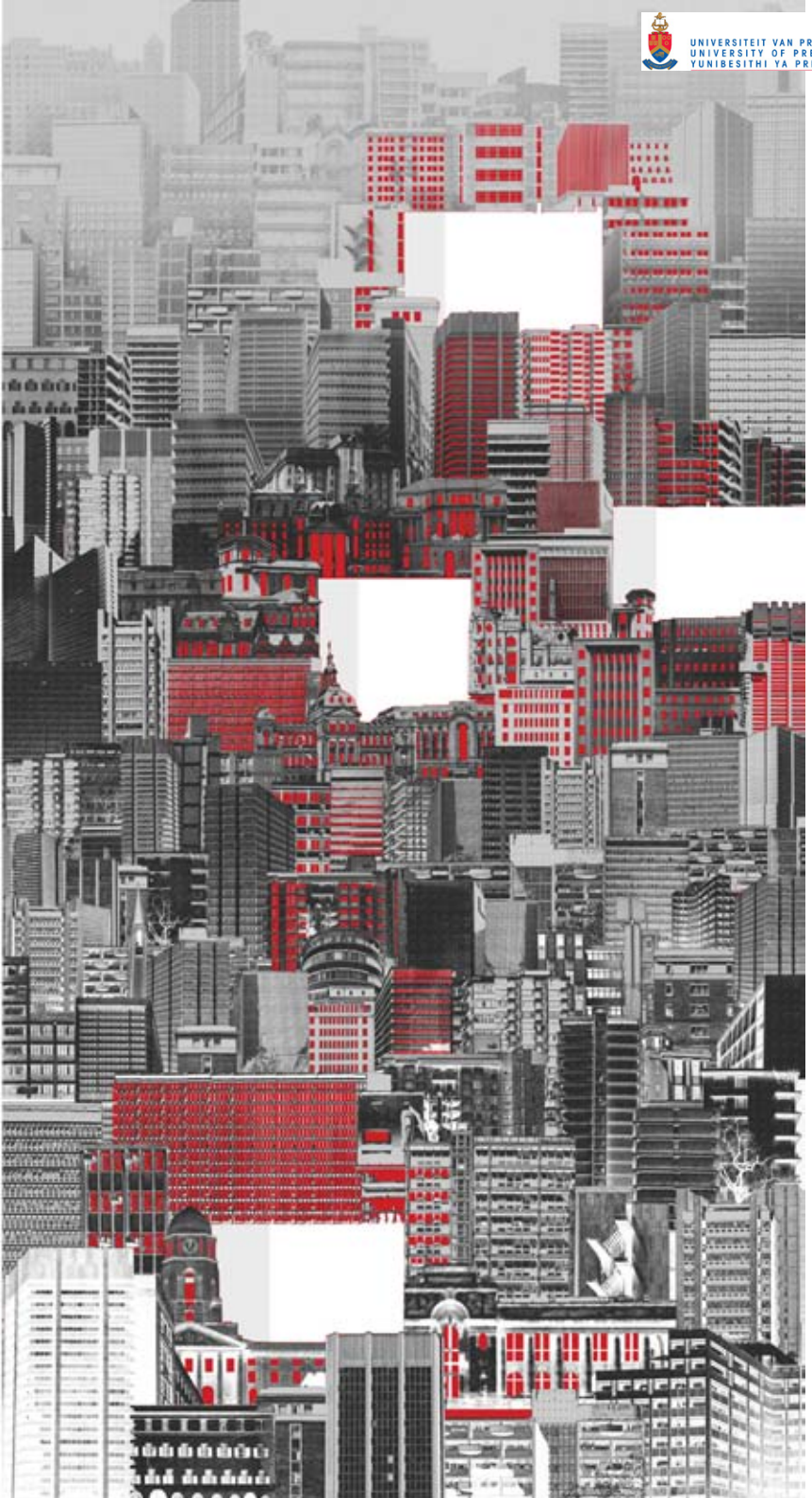
we want to invert our approach in order rather to determine those fixed elements that will essentially contribute to form the base upon which urban diversity can grow. These elements may include spaces of social, cultural, political or economic importance.

Diversity cannot be created in undefined space, nor can it be created by a piece of architecture in isolation. It is the relationship between the space and the architecture as well as the relationship between various elements of architecture or places with social, cultural, economic, or political significance that create tension and fields of possibility within which experiential space can develop. Our framework is about the relationship, the coexistence, and the threshold. It is not about generating a prescriptive guideline for intervention at city or block level. The approach is that various architectures and physical interventions can still contribute to the creation of the experiential field.

Experiential space is multi-faceted; it includes elements such as enclosure, hierarchy, threshold, definition, meaning and symbol. Experiential space is sensory (perceptual) and may involve elements such as sound, colour, and texture. It is rich in social, cultural and economic meaning and evokes emotional involvement and response.

Different combinations of perceptual / sensory elements, program and definitions of space will read as different space experiences and will lead to different uses of space. All of these elements will contribute to the legibility

Figure 8: Urban status quo



of spaces and ultimately to the intelligibility of the city.

The experiential field is directly influenced by the urban fabric within which it is contained, and may extend into all public spaces in this urban fabric, including public buildings. Although a number of elements has an influence on the perception of the experiential field, the most important element is the threshold. The threshold stands in contrast to the boundary.

The boundary merely defines and separates the private and public realms. The threshold defines public space, contributes to the formation, richness and understanding of the experiential field and forms a transition space linking the private and public realms. The threshold acts as a join or stitch, underlining the importance of communication and interaction between the private and public realms. The term 'join' denotes a physical space connecting two parts of a system but also indicates an action. The threshold is a meeting space providing the potential for social interaction, activity and movement.

The threshold is not a fixed space with a fixed character. It consists of a number of combinations of various elements, all contributing to the sensory richness of the experiential field. If two or three elements change in a certain combination, it becomes an indication of a certain type of spatial experience. For example: the reading of a red light district would manifest through elements such as neon signs, closed doors and little overt social interaction whereas an entertainment area would become legible

Figure 9: Development of the threshold

through a combination of open doors, more muted signage, tables on the street with overt interaction, certain smells and conversational sound.

The aim of the framework is to exploit the city as a field of possibility within which tension and dialogue between points of significance can develop into an experiential field. The city currently contains a number of well-used points of significance, but the experiential fields between these points are often inadequately developed. Through the potential development of additional points of significance as well as the treatment of threshold spaces within the tensions between these points, the experiential field will be further developed.

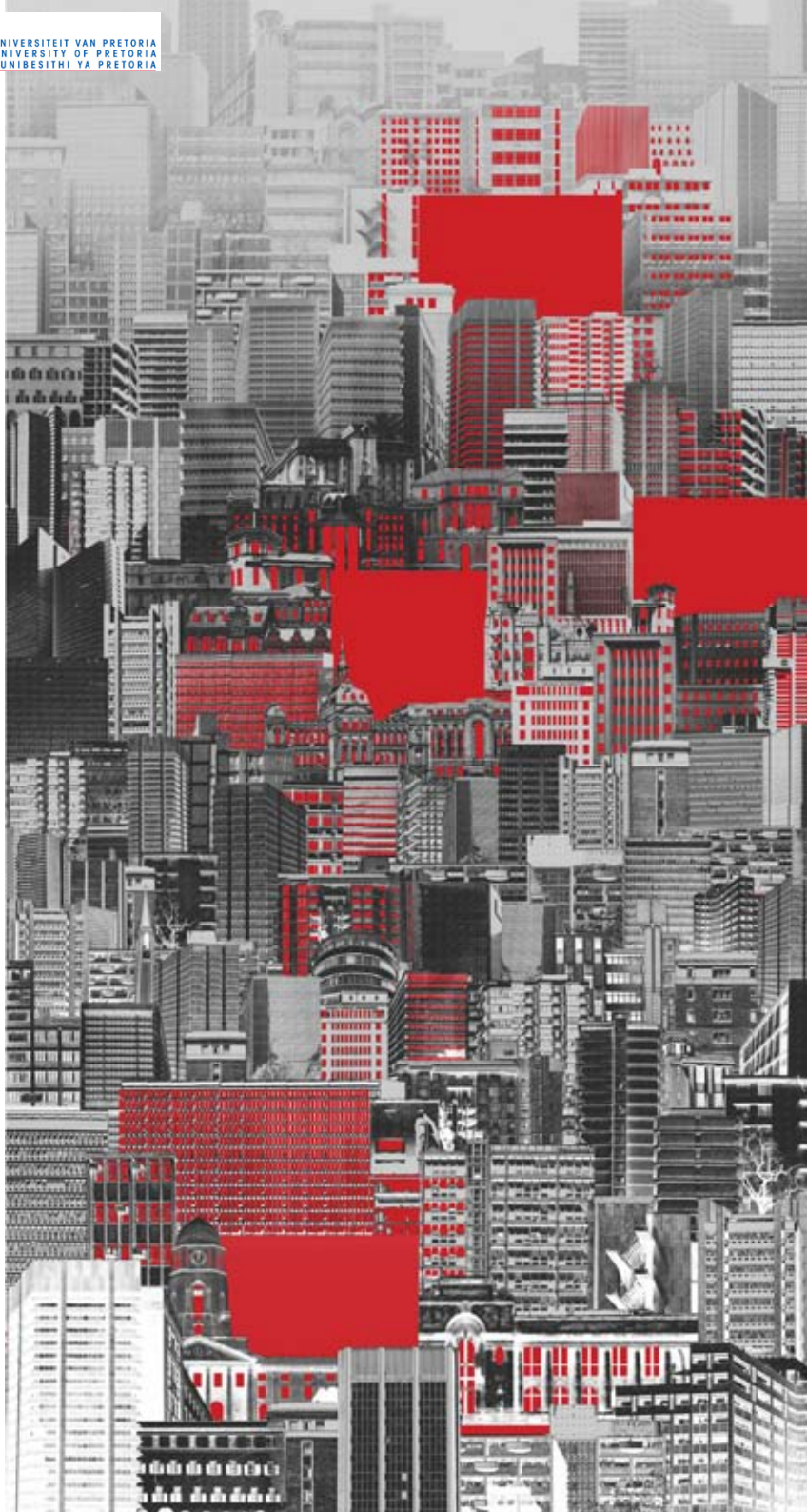


Figure 10: Developed experiential field - BCe1 Framework

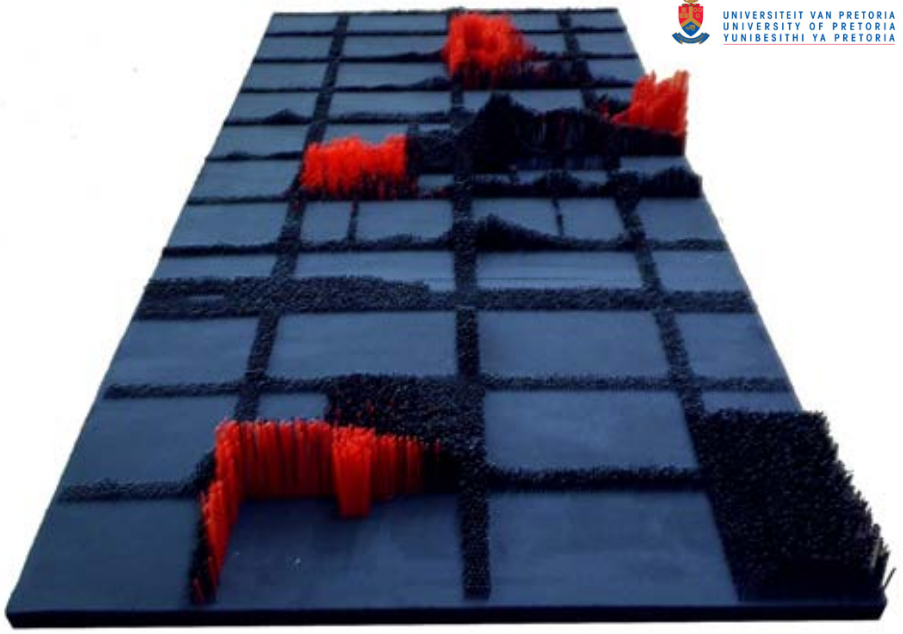


Figure 12: BCe1 Framework model: experiential field (south to north)

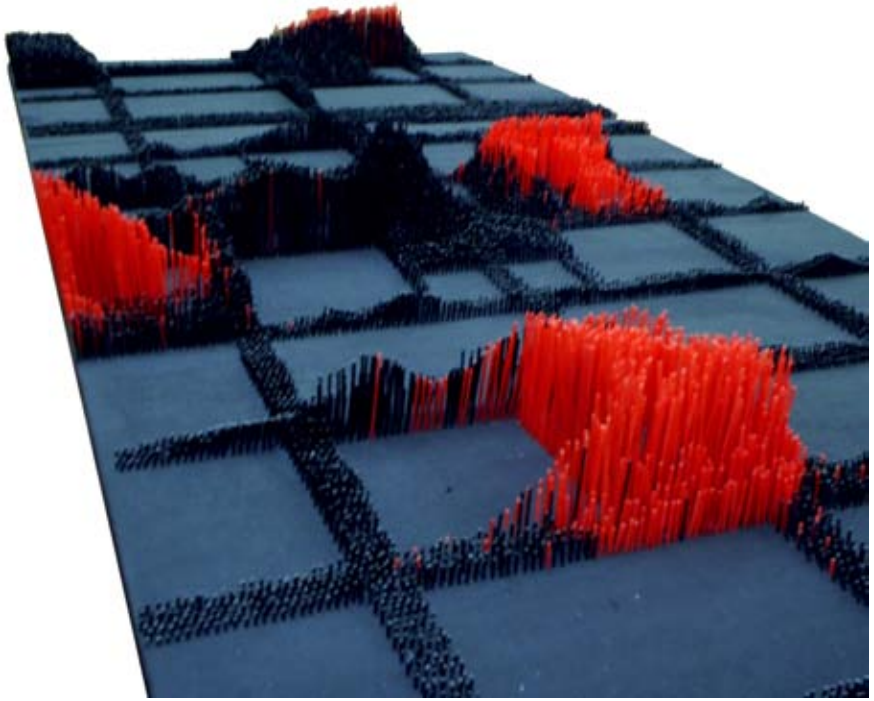


Figure 11: BCe1 Framework model: experiential field (northeast to southwest)

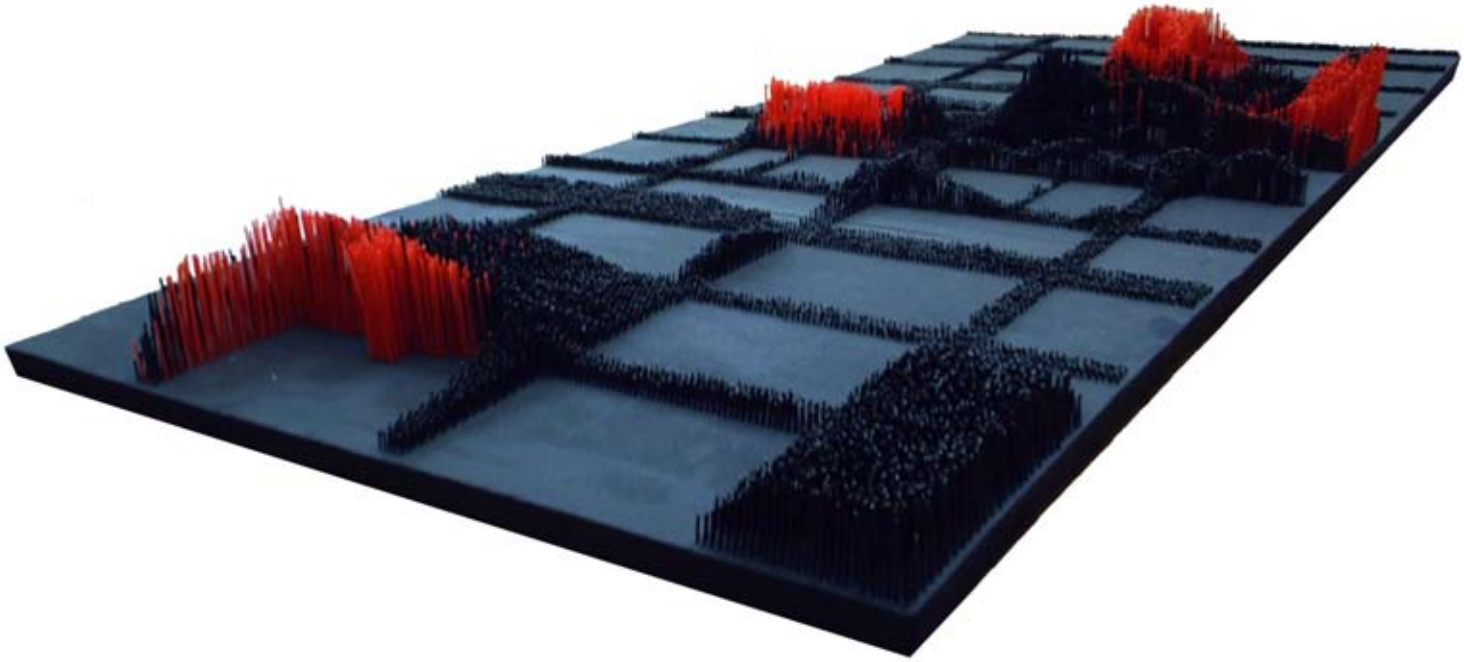
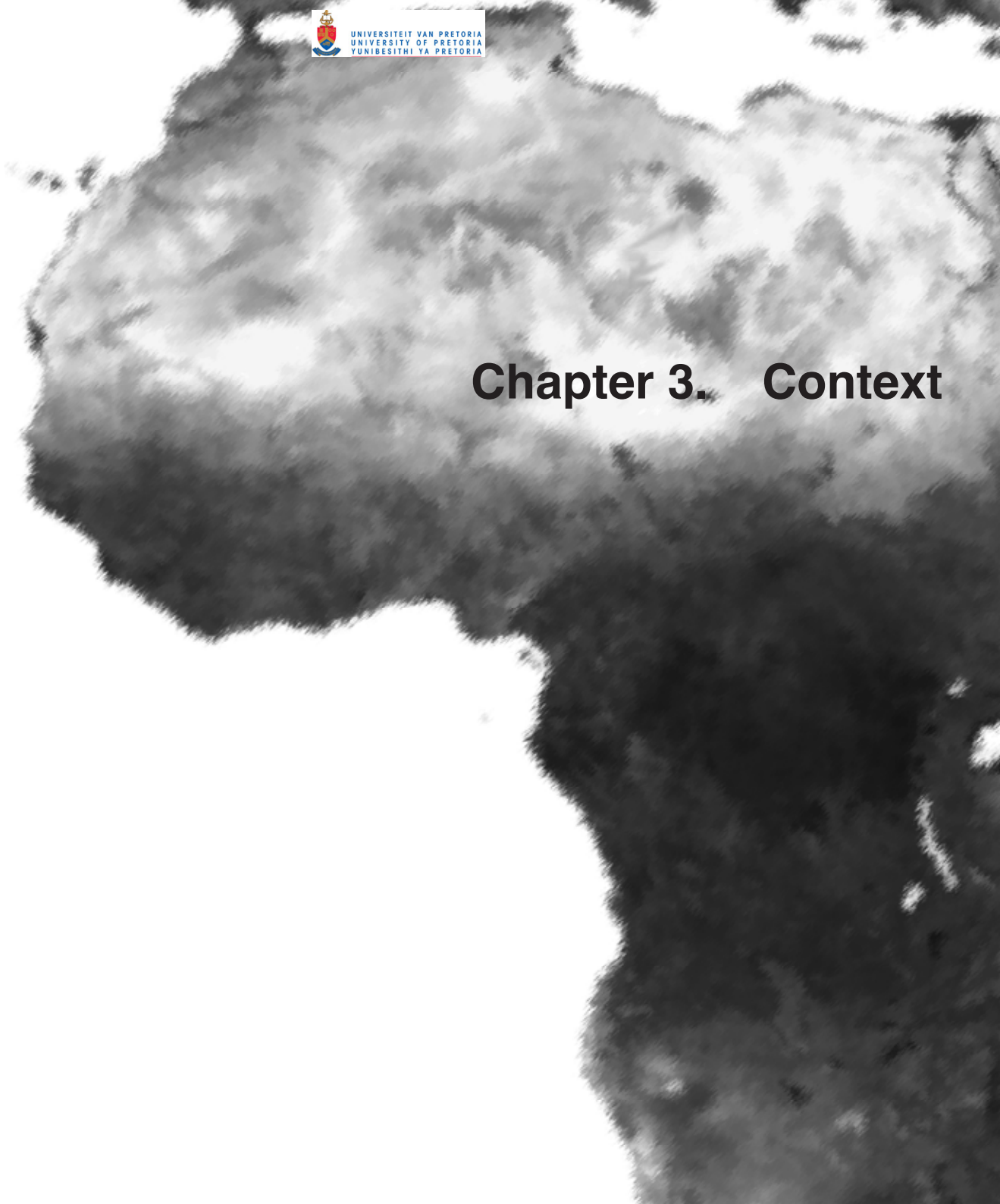


Figure 13: BCe1 Framework model: experiential field (southeast to northwest)



Chapter 3. Context

Figure 14: Large scale context

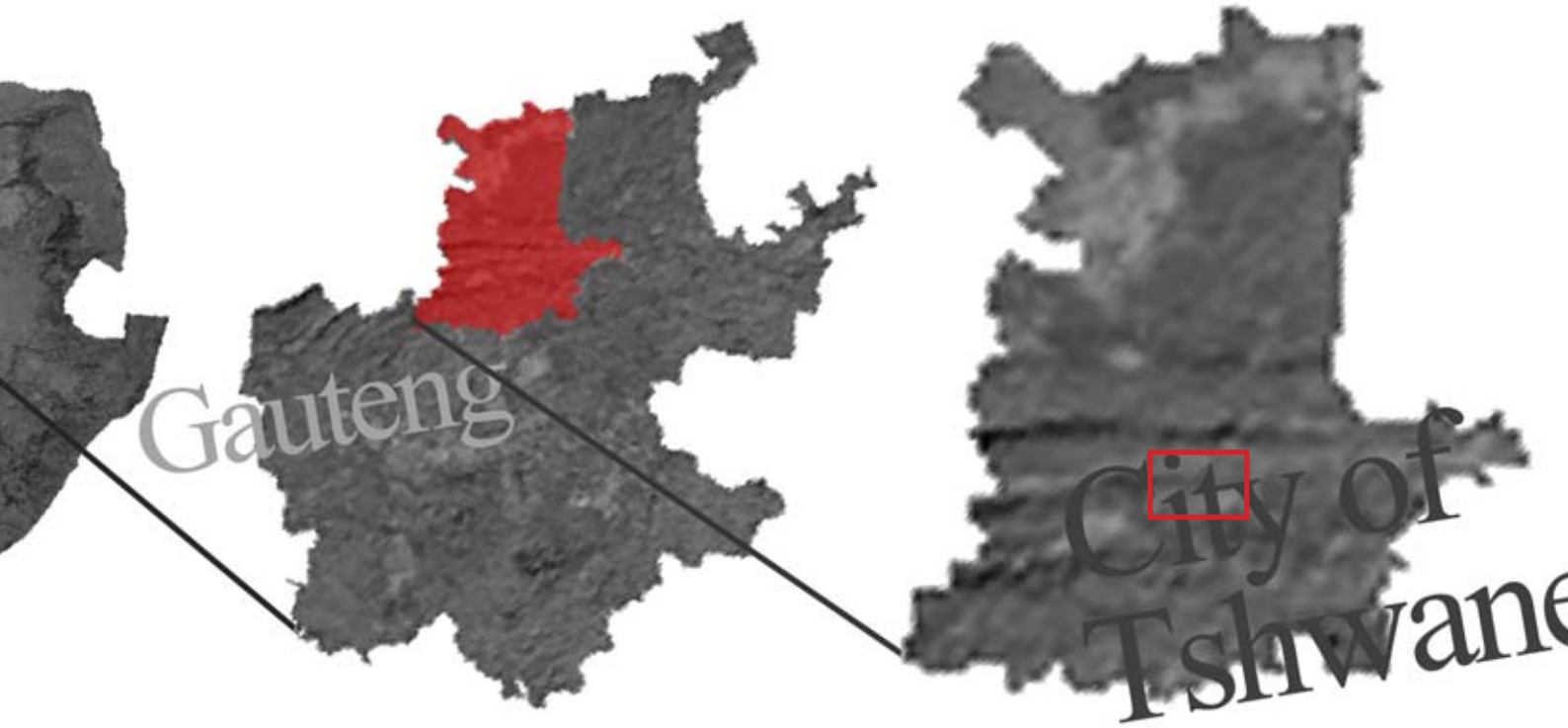

Gauteng
City of
Tshwane

Figure 15: Urban location (top)
Figure 16: Block location (left)

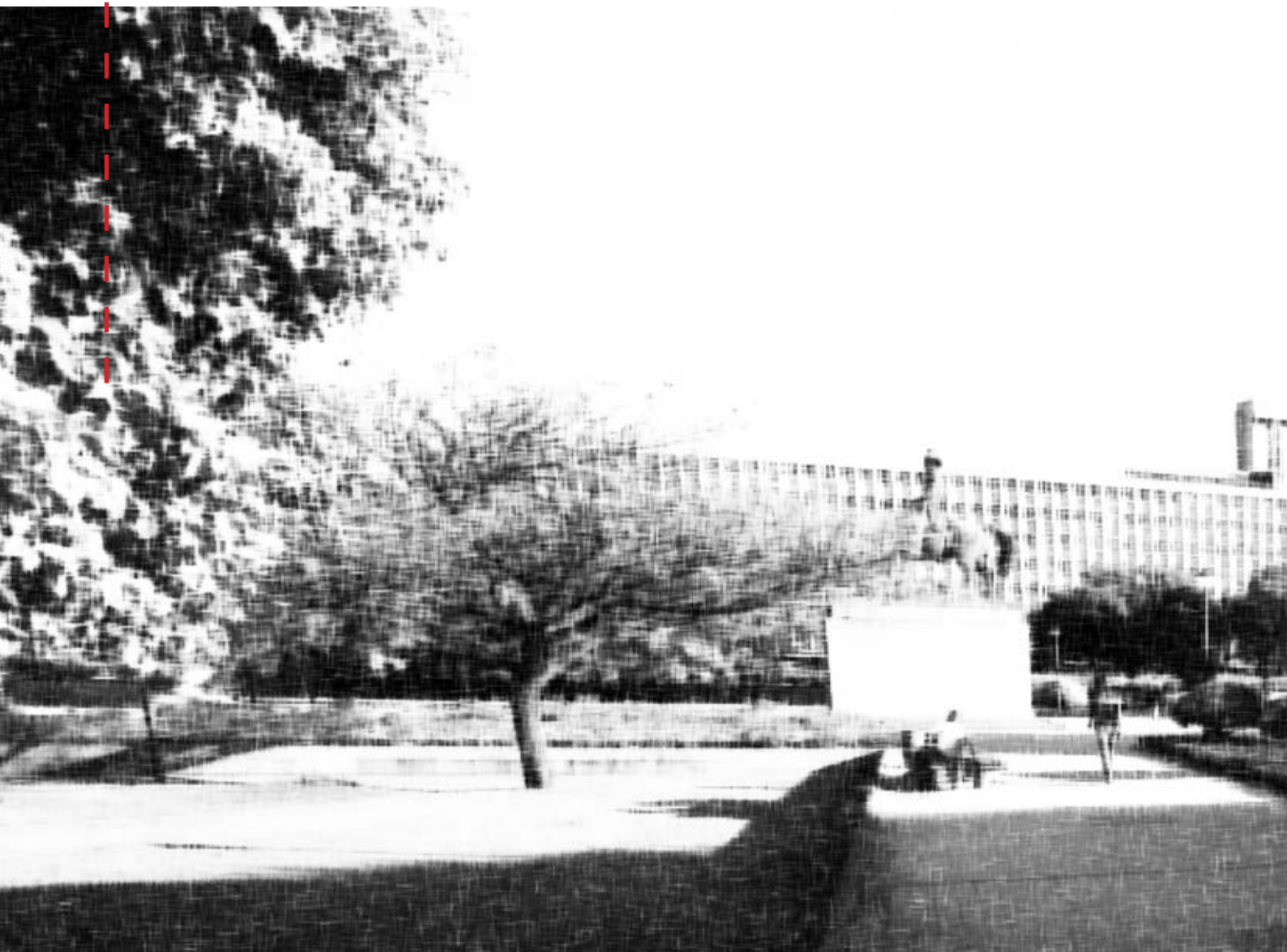
The requirements initially set out for choice of site were:

- Accessibility - the site needs to be in close proximity to a public transport facility to ensure access to all citizens
- Visibility - visibility could be seen as a component of accessibility. Knowledge of the location of the department is crucial
- Symbolic significance - the dissertation poses that the approach of the democratic government with regard to the capital city has been to build on the existing. In this sense the contribution of new layers of meaning, added to existing symbolism is important.

The larger urban site that was chosen was the Pretorius Square area, which is located in proximity to Pretoria Station and Bosman Street taxi rank, which connects the central city to Attridgeville and Mamelodi and is the main regional public transport connection to the east west and south.

This urban site is located on one of the main axes of the city, Paul Kruger Street. Additionally, having Pretorius Square as central point increases awareness and prominence of the site, and therefore the visibility thereof. The site has a strong heritage component and symbolic significance that specifically centres around national pride and identity, namely the City Hall and Transvaal Museum.

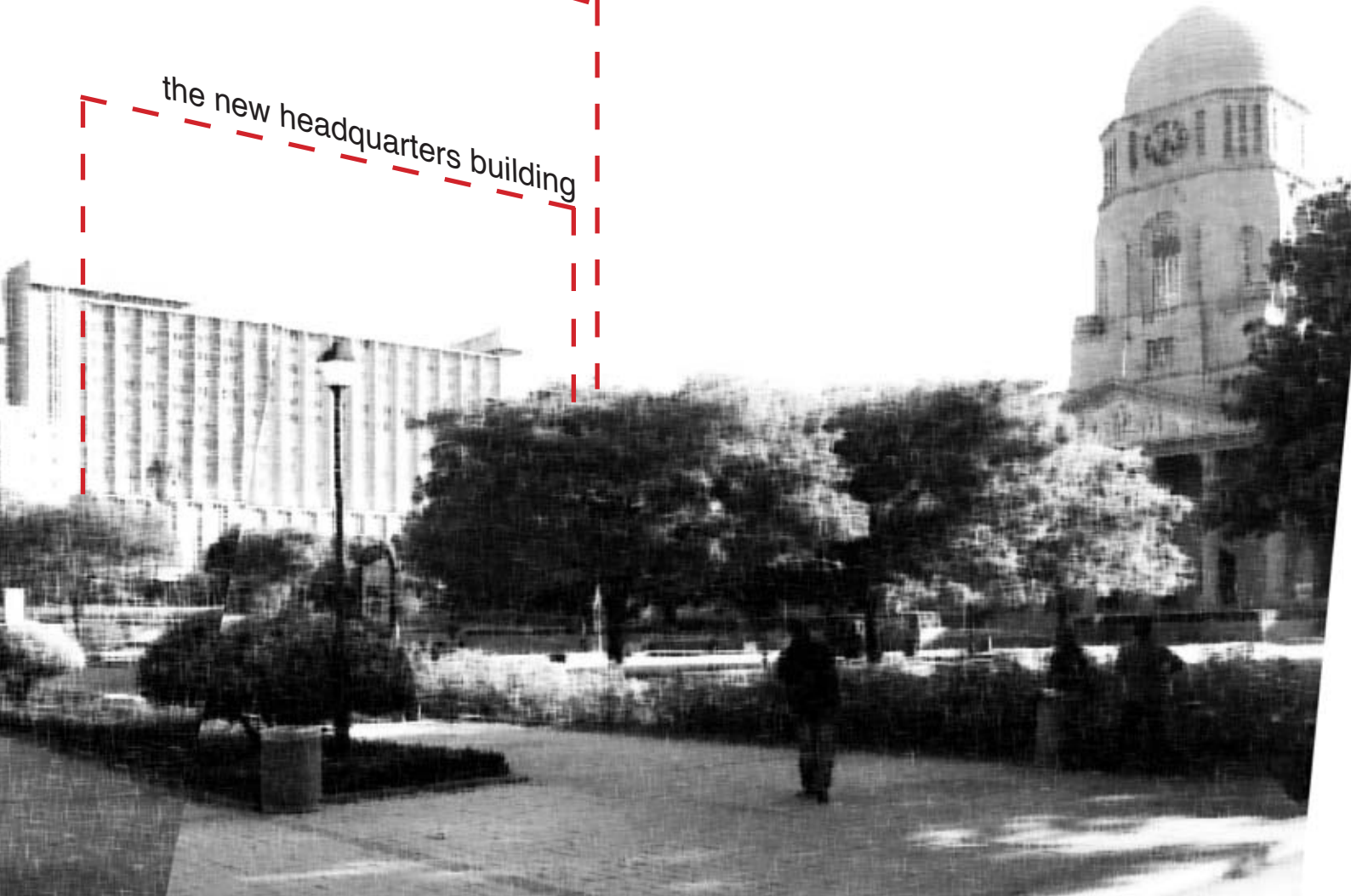
Within this context the city block to the south of the square was chosen. This city block is government owned, and provides enough space for the consolidation of the Department of Home Affairs, one of the largest departments in the national government. Its direct relation to the square provides an opportunity for adding a new layer of symbolic significance to the urban fabric of the national capital city, in dialogue with the existing symbolic significance of the site.



i. Site information

City block	- 30 622msq
Headquarters building site	- 7,153msq
Zoning	- general business
Building lines	- 4,5m. 5m @ street
Height restriction	- 18 storeys
Coverage	- 0,6
Current use	- Parking facilities for government departments

Figure 17: Immediate context



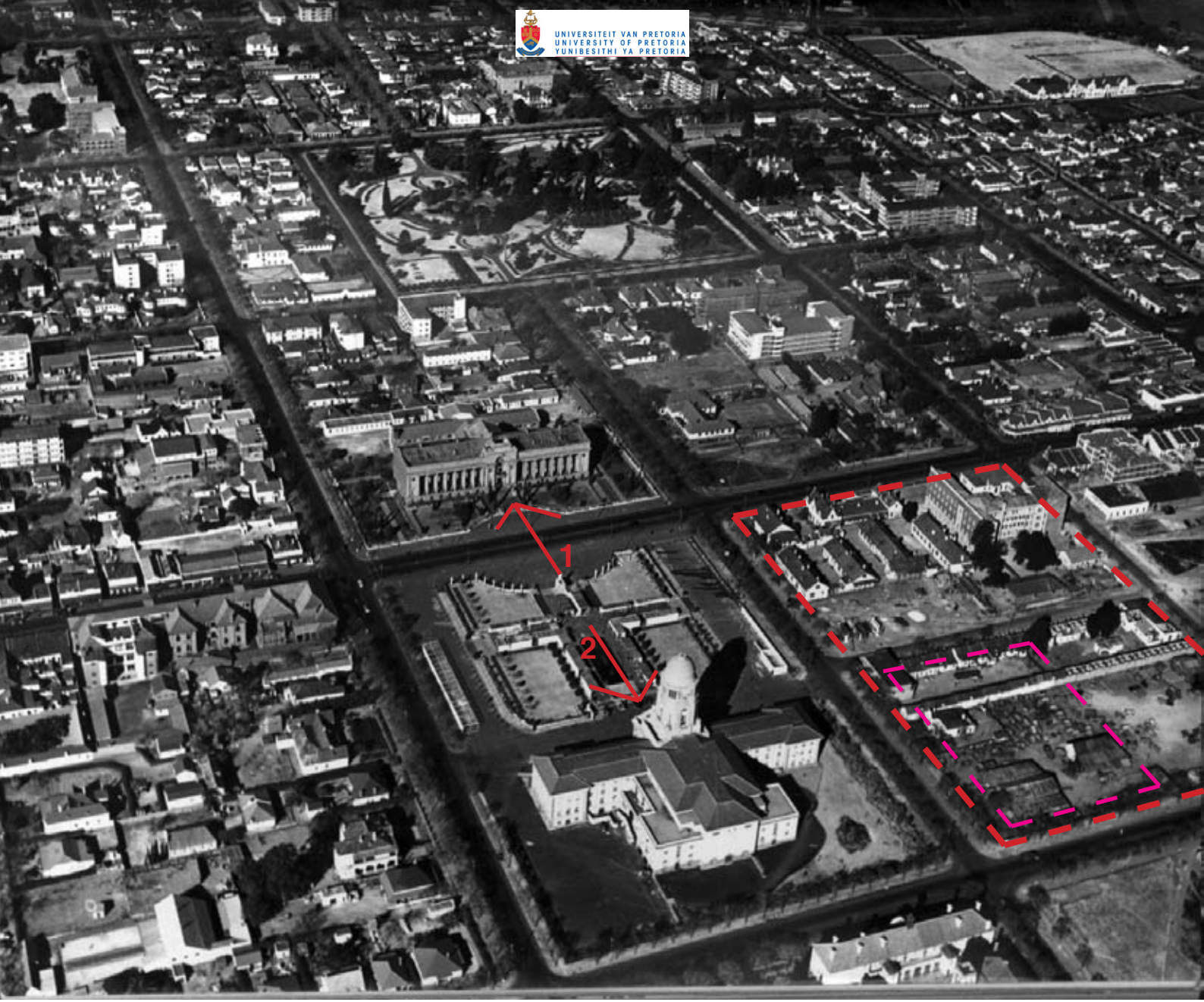


Figure 18: Aerial photo of pretorius square taken in late 1930s, looking in a southeasterly direction

Figure 19: Transvaal Museum
Figure 20: City Hall

Figure 21: Public spaces of significance
Figure 22: Local heritage assets

ii. Heritage elements

The immediate urban context of the site has a very strong heritage component.

The Government of the South African Republic decided in 1892 to found a state museum. The new museum building in Paul Kruger Street, Transvaal Museum, was only completed in 1914 (FitzSimons, 1951). According to FitzSimons, one of the most important aims laid down at the inception of the museum, was to foster a love of country, a national pride.

A competition for the design of the City Hall was won by FG Mackintosh and JL Hall in 1926. The building was finalised in 1935, and was used as city administration (Le Roux, 1993). The building also contains theatre facilities and due to the removal of the old church on Church Square became a focal point for national pride.

The square has largely served as an approach to the City Hall, with a formal route on the main axis between the City Hall and the Transvaal Museum. The formal route contains sculptural work and lily ponds designed by Coert Steynberg and installed in 1955 as part of centenary celebrations (Le Roux, 1993). Recently this space has become a popular gathering point for political meetings and mass gatherings, thus still retaining its character of national significance.

The approach of the time was that the construction of public buildings was strongly related to the construction of national identity. According to Freschi (2006) public buildings 'expounded the cultural and historical virtues and triumphs of the nation". Freschi (2006) quotes Christopher Wren, capturing this view: "public Buildings being the ornament of a Country; it establishes a Nation, draws People and commerce; makes the people love their native Country."

At the time that these buildings were built, the urban fabric of the city consisted mainly of two or three storey buildings, or in some areas even single storey buildings. The combination of the City Hall and the Transvaal Museum around Pretorius Square resulted in a monumental space, where the nationalism that these buildings represented dominated the surroundings and inspired national pride. (See aerial photo on p22)

Legend opposite:
1. City hall
   1931, F G McIntosh.
2. Transvaal Museum
   1913, DOW (Cleland)
3. Pretorius Square
4. Old Corporation Building
   1930s Eclectic Classicism
5. Pretoria Fire Station

Additional elements with value:
NZASM Building
1963, SPOORNET. (Value in definition of square)

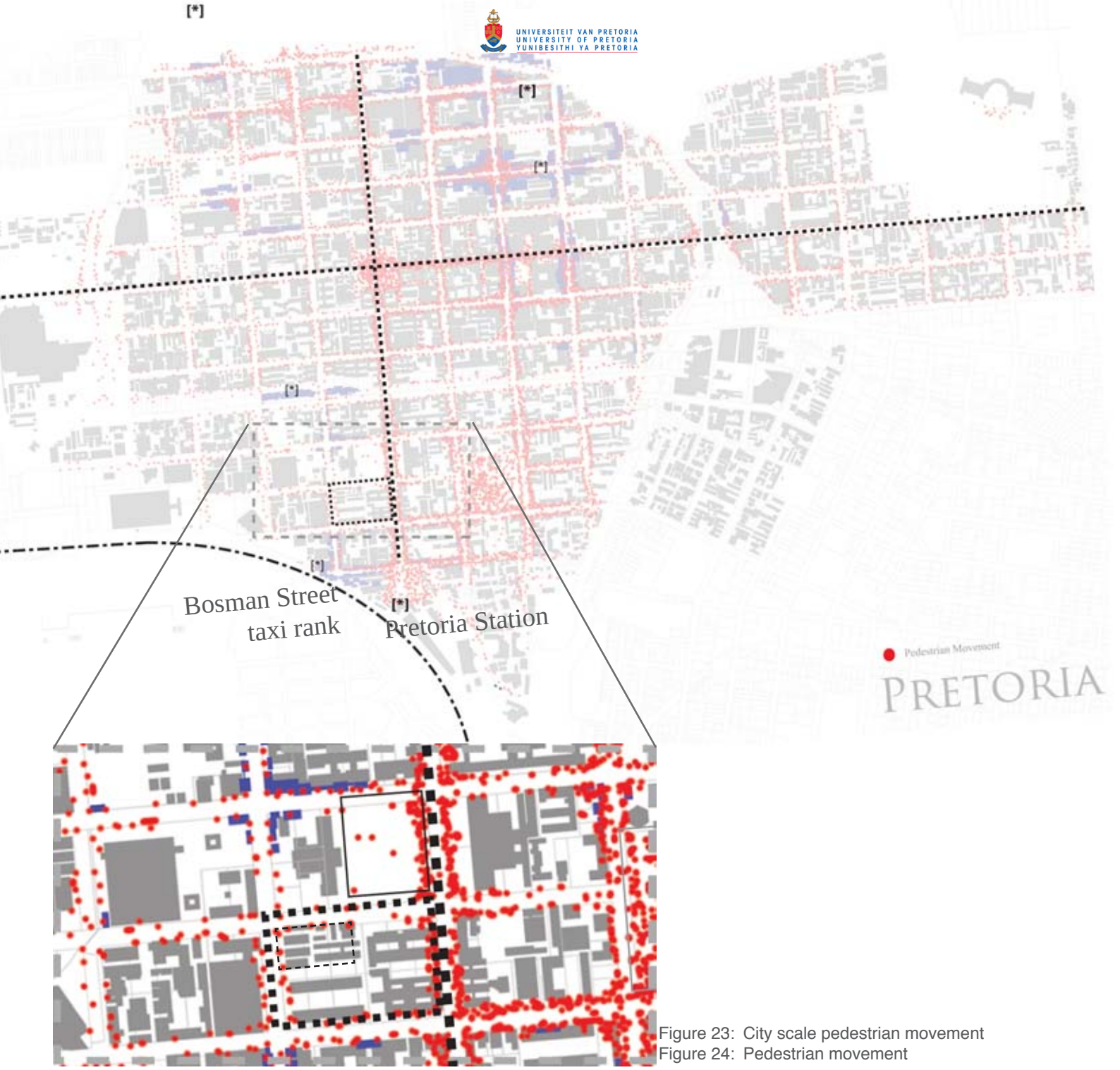


Figure 23: City scale pedestrian movement
Figure 24: Pedestrian movement

iii. Movement and access

As mentioned earlier the site is in close proximity to Pretoria Station and the Bosman Street taxi rank, which are the main regional public transport connections to Attridgeville / Laudium in the west, Tembisa / Johannesburg to the south and Mamelodi to the east.

Pedestrian movement is predominantly in the north-south direction, moving from Pretoria station and Bosman Street taxi rank into the city. Movement filters along Bosman Street, through the square and along Paul Kruger Street,

In terms of vehicle traffic, Bosman Street (north/south) and Visagie Street (east/west) carry city scale traffic. The main metropolitan scale roads are Van der Walt and Andries Streets (north/south) and Skinner Street (east/west), which do not directly influence the site.

(See analysis on next page)

Figure 25: limited vehicular movement in Jacob Maree Street

A

City and metropolitan scale vehicular traffic
One way street, fast moving traffic
Little pedestrian traffic

Edge condition: definition varies, few entrances, little relation to the street

B

City scale traffic
Large amount of pedestrian movement
Active informal market

Edge condition: well defined, active edge, entrances, retail activity, informal trade

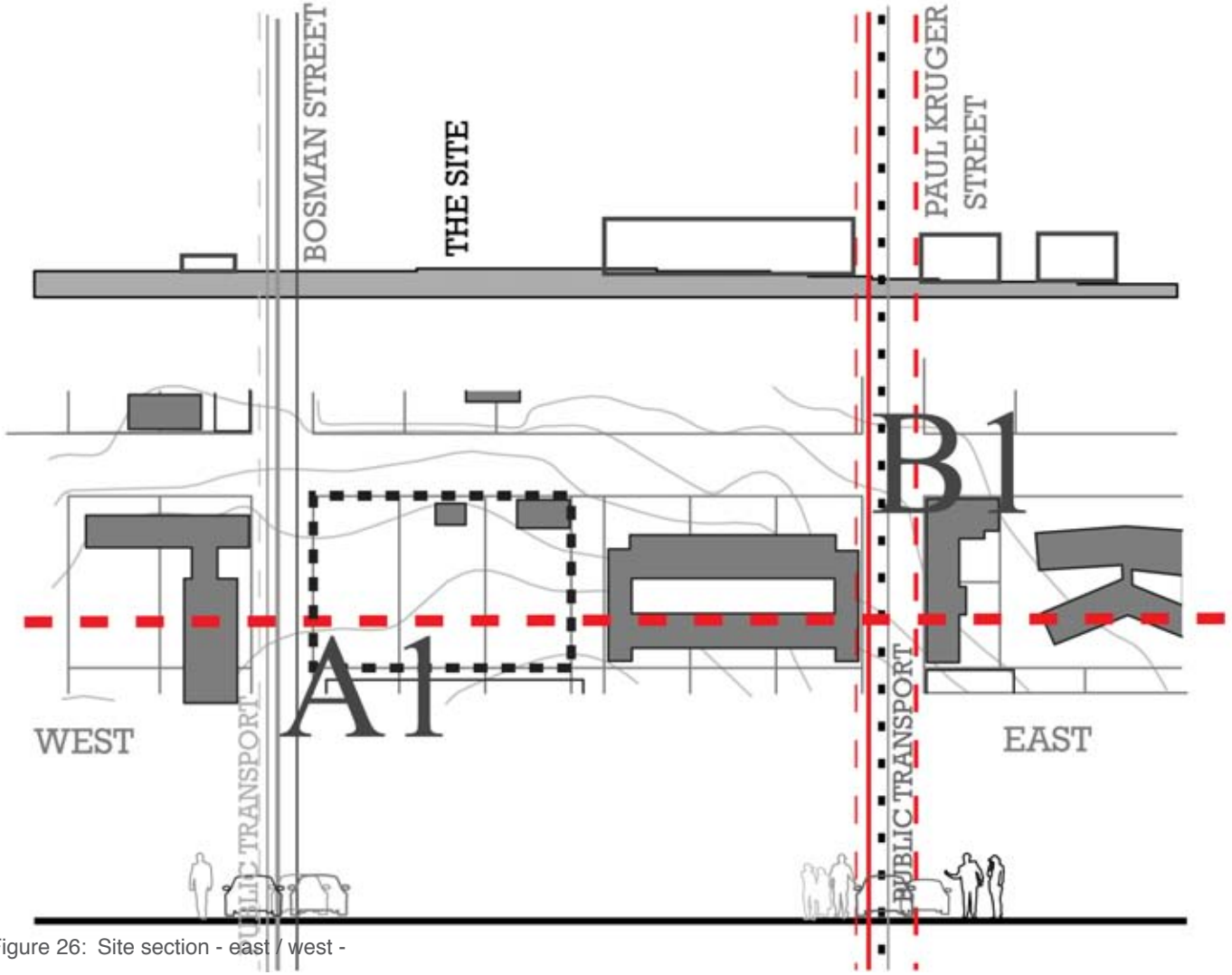


Figure 26: Site section - east / west -

C

Traffic limited, street cut off from circulation to both east and west
Land use does not generate pedestrian activity

Edge condition: well defined, but buildings do not related directly to street

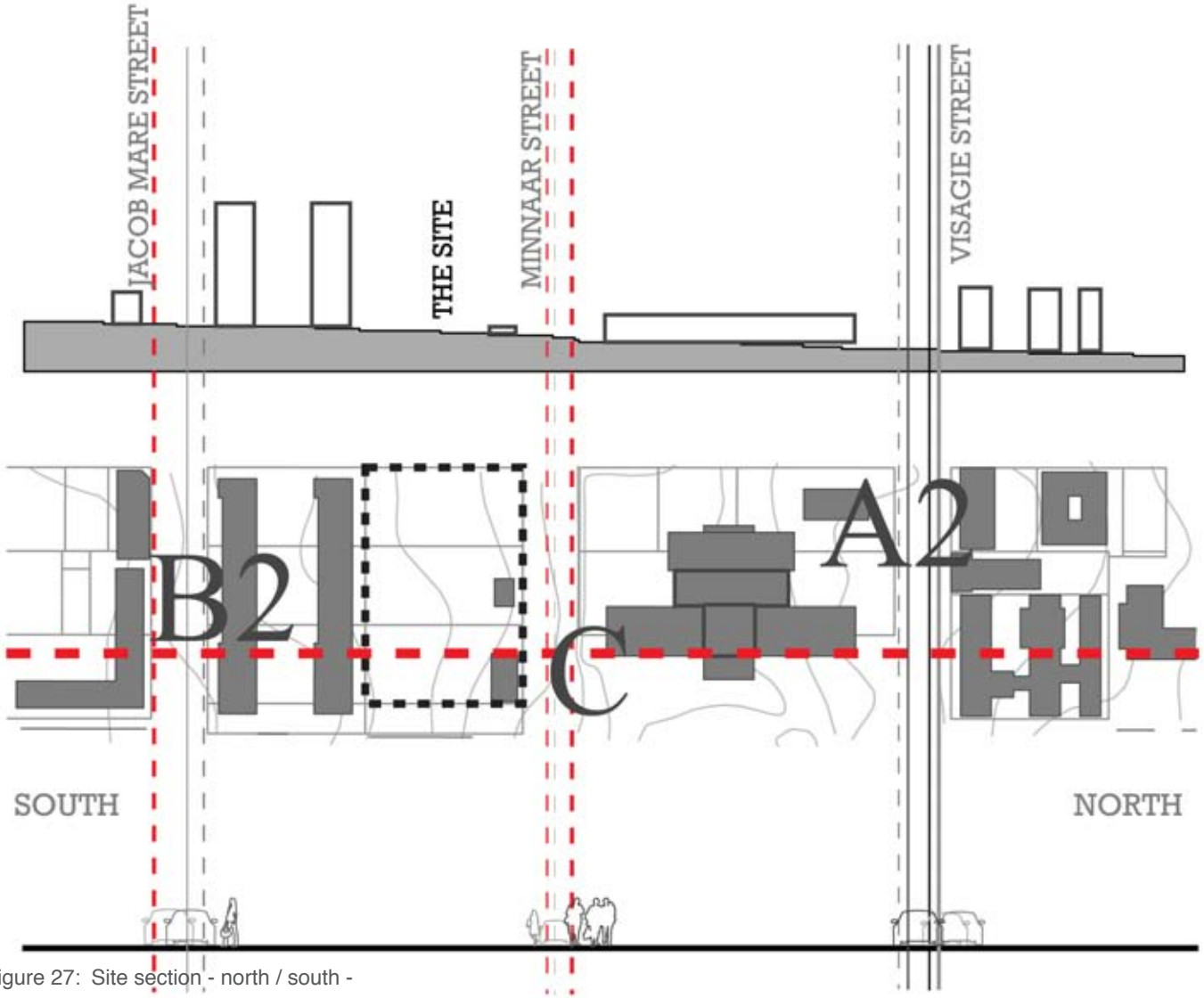
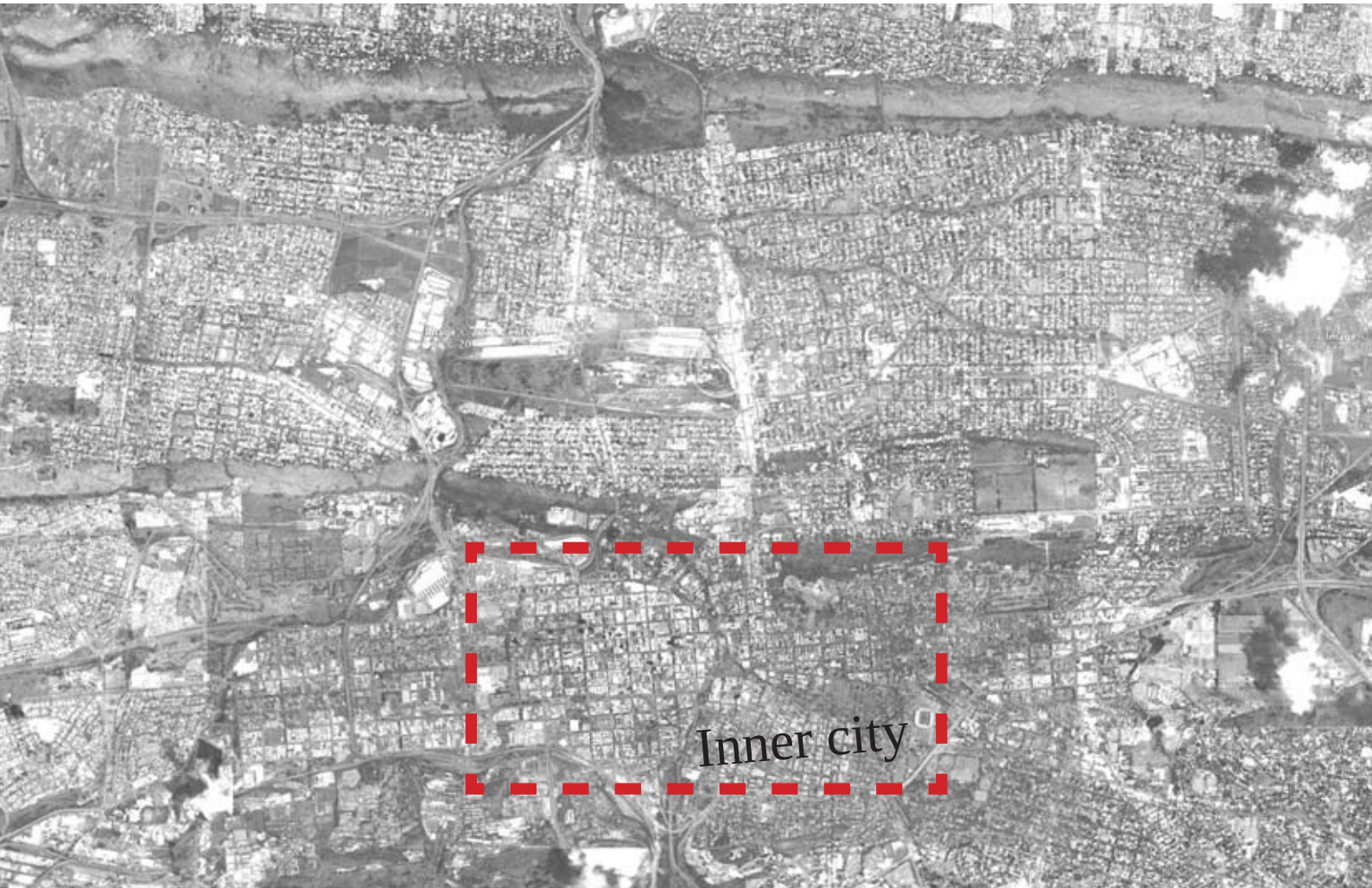


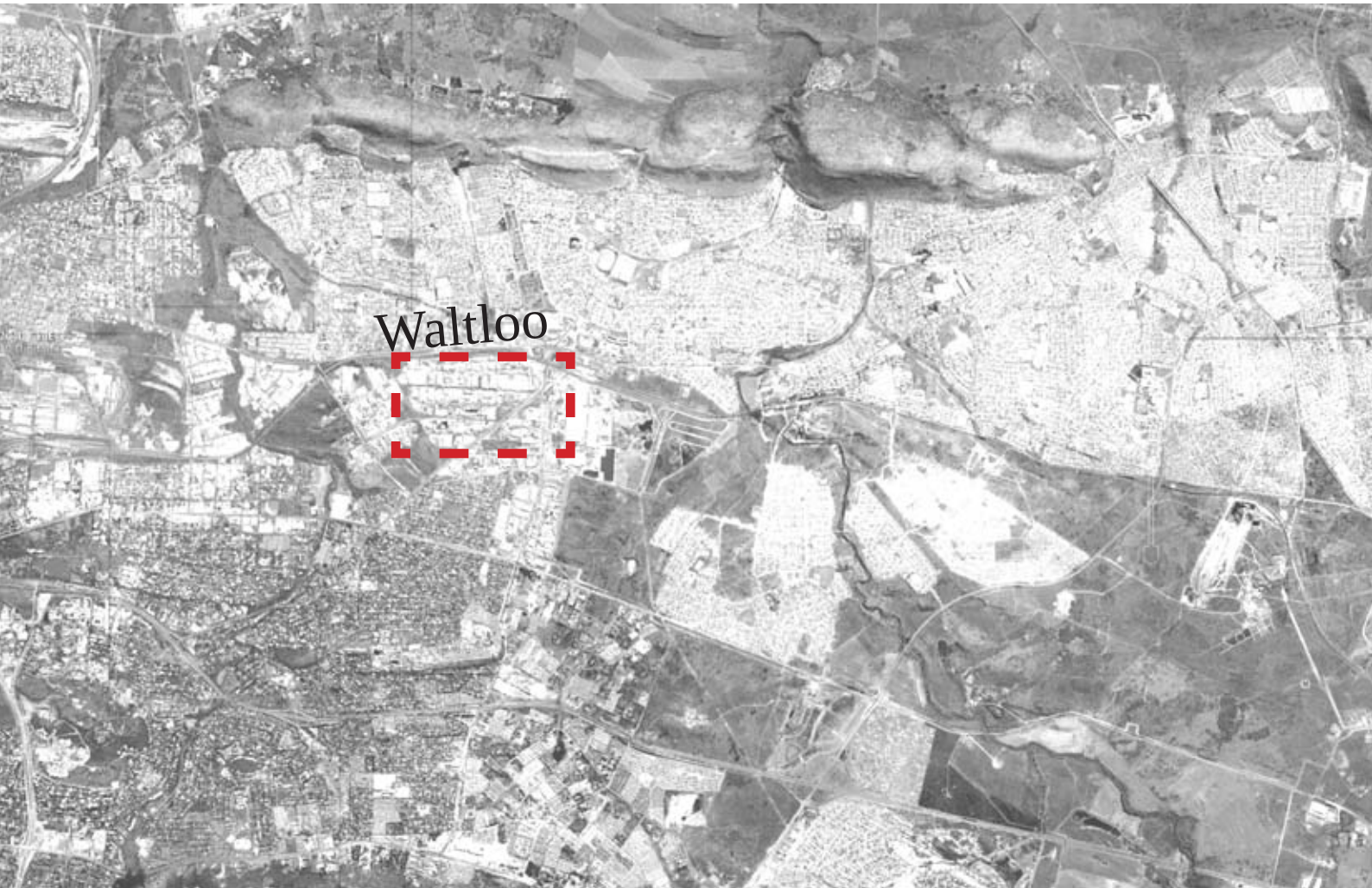
Figure 27: Site section - north / south -

Chapter 4. The Client


Inner city

1. Background

In view of the cabinet decision that all National Government Departments should be located within Pretoria, the inner city and historical core of the City of Tshwane Metropolitan Municipality, the Department of Home Affairs is currently in the process of finding accommodation in the city.



2. Department of Home Affairs

The department has as its main mandate:

The determination and confirmation of the status of persons by providing enabling documents in the interest of promoting and protecting the national integrity.

The department has a central role in the establishment of a new national identity under the new democracy, forming an 'official link' between the individual identity and that of the community, or the nation.

The department forms part of National Government, the highest tier in a three-tier government system. National Government is aimed at higher level function, including legislative and regulative functions. The Department of Home Affairs is unique in the sense that it does not overlap with 'lower' tiers of government. All functions rest with the central department, which contains branch offices all over the country.

The branch offices essentially deal with public accessibility and civic functions and are in some ways the 'face' of the department.

Being a National Government Department, Home Affairs has policy, legal and administrative functions, thus requiring a large amount of office space..

In addition to the higher level administrative functions and the public interface, the department has the mandate to maintain the national population register, which includes printing and storage facilities as well as the protection of the registers.

3. Current accommodation

The headquarters of the department is currently dispersed across the city with the head-offices located in Waltloo, on the outskirts of the city.

The current location of the head-office does not comply with the decision of Cabinet that National Government offices should be located in the inner city, as mentioned earlier in this document.
Additionally the department has indicated a need for a broader range of facilities than what they currently have access to.

4. Accommodation

The Department of Home Affairs is one of the largest departments in National Government with a total space requirement of **103 343msq** as well as a total of 700 parking bays (19 600msq) for the consolidation.

i. Campus

The total space requirement including parking, is 122 943msq.

Current approximate total space available in existing buildings is 94 566msq

The accommodation into the existing buildings on the campus will be as follows:

NZASM building:
- National Immigration
- Chief Directorates reporting to DDG
- Restaurant
- Parking

Old Corporation building:
- Finance & Supply chain management,
- Information Services
- Creche

New Corporation building:
- Civic Services
- Retail
- Parking

ii. New headquarters

The high level accommodation requirement for the proposed functions indicates the following:
(Due to the sensitivity of this information the Department of Home Affairs did not release the detailed space requirements. It was however possible to obtain a certain amount of larger scale space requirements, ensuring that the overall accommodation requirements of the department are met in the design)

Office space
- Ministry
- Deputy Ministry
- Director General
- Chief Operating Officer
- Departments

Meeting space
- Conference facilities
- Meeting spaces
- Catering facilities

Public Interface
- Branch office
- Client service centre
- Call centre

Chapter 5. Literature

“It is hardly surprising, given the way in which architectural meaning has been suppressed so severely over the past fifty years or so, that some of their attempts, to say the least, are rather halting. They still do not seem sure just how buildings ‘carry’ meaning.” (Broadbent, 1996, p.138)

1. Identity: the question of being

One of the main questions that people are confronted with , and which is especially relevant in the current South African context, is the question of being. We have an innate desire to understand who we are and what our place is in the world. Heidegger stated that this question of being is central to life and should be celebrated (Sharr, 2007, p.7).

To Heidegger the question of being starts with the fact that human beings 'are'. To him this fact goes hand in hand with the fact that the world exists before we attempt to understand it (Palasmaa, 2007, p. 27). According to him there are four basic conditions of human existence and these four basic elements provide the basis around which we orientate ourselves, and within which we relate our being. The four elements are: earth, sky, divinities and mortals. It is through our experience of these elements that we may come to understand our own being. These elements are always present and therefore provide a constant point of reference to which we can align ourselves and question our own qualities and characteristics as well as the circumstances that we find ourselves in (Sharr, 2007, pp. 31 -32).

Heidegger op cit. is concerned with the fact that, especially in the western world, aspects of everyday life distract us from the priority of considering the question of being. He states that the awareness of being has become rare and that we are losing the ability to understand our existence in a broader context. Palasmaa (ibit.) supports this view and states that there is an increasing separation of the self from the world. He links this separation to the development of western 'ego-consciousness'.

Heidegger states that there are traces of the four elements in the environment and that when we notice these reminders, and reflect on our own being, it offers a respite from the daily life (Sharr, 2007, p. 7-8). We have a 'mental need' to experience this consciousness of being rooted in a larger context. According to Palasmaa (ibit.) it is the task of architecture, in the man-made environment, to facilitate this experience. He states that architecture is confronted with expressing and relating man's being in the world and is engaged in the metaphysical questions of time and duration and of life and death. Architecture can help to centre people in the world and thus that the task of architecture is to 'make visible how the world touches us' (Palasmaa, 2007). The aim of architecture in this sense is to offer individuals a place from which they can contemplate their being.

Architecture further relates to the four elements identified by Heidegger through the fact that it configures societal institutions and the activities of human presence as well as interaction and separation (Palasmaa, 2005, p.50).

i. 'Being' in Africa

In African philosophy the consideration of the four elements classified by Heidegger shifts in order to give priority to 'mortals'. The question of 'being' is considered first and foremost in relation to the collective. The saying 'umuntu ngumuntu nga bantu', which means that 'to be a human being is to affirm one's humanity by recognising the humanity of others' (Van Rensburg, n. d., p.19) is central in this approach.

The African history is one of collectivism (Travis, 1991, p.15). Spatial layouts of native compounds are organised around a central collective space, and society was based on a communal culture of extended families, joint acquisition and shared possession (Hughes, 1994, pp. 59-60). Most activities were structured within the central collective space

and Steyn (2006, p.42) goes so far as stating that this collective space was indeed viewed as the home and that the surrounding individual structures served merely as sleeping quarters.

In the African context buildings are arranged in such a way as to reveal spaces sequentially, and hierarchically, and the value of built structures lies in the fact that they provide settings for interaction (Lipman, 2003, p.6). This orientation towards society adds a layer of social responsibility to the creation of architecture.

In the contemporary African setting the flexibility and ephemerality of urban spaces come into focus as a replacement of the traditional communal space. Morojele (in Van Rensburg, n.d., p.20) explains that ritual space becomes a temporary event as impermanent stages are put together in significant communal spaces. Parallel to the ritual event in communal space is the transfiguration of domestic space towards a social event, temporarily blurring the boundaries between public and private. The strength of the identity of the being in relation to the community, thus continues in the contemporary urban setting.

ii. Multiple identities

Joubert (2007, p.1) suggests that the notion of identity has never throughout history been as pertinent as currently. This pertinent search for identity surely is the result of a number of circumstances. The main circumstance would be the fact that since 1994 South Africa has been, once again, at a crossroad where diverse cultures and identities have come together in the first true attempt at a complete democracy. The validation of a whole set of new identities as equal to that which has been the dominant identity was bound to be, at the very least, a slightly unsteady process.

In addition to the above-mentioned set of circumstances the process of globalisation has placed new emphasis on regional identities. Featherstone (n.d., p.14) claims that against the expectation of a created uniformity, the result of globalisation has been raised levels of awareness concerning diversity. He states (p. 8-9) that international competition has lead to increasing pressure to develop a 'coherent cultural identity'.

In an increasingly cosmopolitan world this problem is experienced, albeit less intensely, all over the world. International travel and accessibility has lead to the development of sub-cultures and multiple identities in many countries and cities. Initial projections of assimilation seem to have been inaccurate and Featherstone (n.d., p. 9) comments on the acknowledgement of multiple identities.

Within this context it has been noted that human beings have the ability to live with, adopt, multiple identities (Featherstone, n.d.). He states, when discussing African-American cultures, that there exists in their identity a double-consciousness, created by their experience both inside and outside of western contexts.

South Africa has a history rich with cultural diversity, according to Van Rensburg (n.d., p.20), a 'highly differentiated society'. Lipman (2003, p.2) states that 'we relish the richness of variety'. The idea of diversity, variety and multiple identities seems to have become the centre of being, the basis of South African identity. Lipman (2003, p.2) comments that there is a belief , in South Africa, that there can be unity in cultural diversity.

The influence of this diversity on architectural expression has been the creation of a heterogeneous, hybrid and complex sign (Noble, 2008, p.72). Joubert (2007, p.1) talks of an architectural introspection and

adds the regional orientation to the list of architecture expressions.

Noble (2008, p.74) states that during the apartheid era black cultural capacities were subjugated. The architecture of the country was informed by dominant ideology and social systems, and according to Noble (ibit, p.75), the architectural discourse of the west.

In the context of acknowledgement of multiple identities and diversity and against the background of man affirming his being, existence, both through the community and his physical environment, it is crucial that, as Noble (ibit, p. 75) puts it, 'African identities and narratives should gain expression in architecture'. This sentiment is reflected by Minister of Public Works, Jeff Radebe (in Joubert, 2007, p.2) when he states that the Government wishes to see, in the built environment, the ability of African trends to reveal themselves.

The aim, in terms of architecture and the built environment, is the subversion of the dominant culture (Noble, 2008, p.75). According to Noble this subversion has as its aim the inclusion of 'subjugated narratives' and the opportunity for 'denied knowledges' to enter the discourse of architectural expression. The goal is therefore an equal representation of the various narratives of cultural diversity, based on the democratic ideal.

This inclusive representation leads to an architectural hybridity, or a double code, which allows the designer to cross the boundary of the dominant discourse or representation (Noble, 2008). Young (in Noble, op cit.) writes that such hybridity eventually results in a process whereby two or more cultures merge into a new cultural identity.

Within the post-apartheid South African context, the question of hybridity in design holds an obvious appeal. It is important that there should not be a continuation of the dominant discourse with regard to architectural and urban expression, but rather a continued focus on the question of expression of the African identity (Noble, 2008, p.87).

There are some common threads in the histories of the various cultural identities that have the potential to bind together the idea of hybridity. The first is the relation to the world, or the site. In his discussions of the various cultural expressions throughout the history of South Africa and specifically the geographic region within which the capital city is located, Fisher (1998) frequently comments on the adaptation of architecture to local environmental circumstances, topography and climate.

In addition to the regionalist basis of architectural expression, traditional African cultures are based on democratic systems. Even though traditionally there would be a chief presiding over the community council (Gumede, 2007, p.65), the views of everyone are accommodated in a relaxed environment. According to Gumede, acceptable compromise is reached only after every voice has been heard.

In a similar way traditional Afrikaner communities were based on a democratic system, where they would congregate and 'sit down' to formulate constitutions and regulations (Fisher, 1998, p.59).

The idea of hybridity is further strengthened by the fact that the main political factions are based on the unification of diverse factions. Gumede (2007, p.3) states that in the establishment of the ANC, the intention was to unify the chiefs as representatives of various traditional forms of authority as well as educated Africans in positions of political leadership. Similarly the establishment of the Republic, and the establishment of Pretoria, unified separate Afrikaner communities.

The current, post-apartheid system is based on the ANC's ideology of respect for past traditions within the principles of equality, liberty and justice (Gumede, 2007, p.5). This forms the ideal basis for the acknowledgement of multiple identities and the development of hybridity in the expression of the various cultures.

2. Expression of identity

As mentioned before theories of architecture and design have been based on Western society morals and ideology. Agrest and Gandelsonas (1996, p.112) state that is has contributed towards the perpetuation of the western society. The consensus among architects is that the representation of African cultures is problematic due to the lack of architectural theory upon which to base such representations (Finch, 2008, p.4).

According to Travis (1991, p. 12) there have been attempts , mostly by African-American architects, to influence this process. These attempts seem to have been difficult and inefficient. In his discussion of attempts by Stern and Tschumi to represent African culture, Finch (2008, p. 4) states that there is a tendency to reduce the 'architecture of Africans' to pre-colonial status or to the 'developmental box'.

i. Symbol, sign and analogy

Since the earliest of times, human beings have used the built environment and formulated symbols to express society and human institutions as well as their relation to the world (Roth, 1993, p.141).

Roth (1993, p.141) states that architecture seems to have been a symbol of communal belief and social institutions since its inception. The significance of certain structures is clear through the obvious care and dedication that would have been needed for their construction. Roth (1993, p.152) writes, for example, that Stonehenge became a tribal expression of identity and communal purpose through the expenditure of labour necessary for its construction. It was a gathering place and it celebrated the recurring cycle of the sun and of life.

Featherstone (n.d., p.109) places the images and memory of the population, dealing with origins and distinctive qualities of the people, as central to the establishment of a symbolic idea of 'nation'. Bonta (1979, p.30) supports this idea by stating that things acquire meaning because of familiarity, in other words, through social usage which then becomes convention. The collective, consensual, interpretation of 'things' is significant in determining meaning. Meaning is shared by the whole community and is reflected in their behaviour (Bonta, 1979, p.65). Saussure (Agres & Gandelsonas, 1996, p.116) refers to this generation of meaning as the 'social contract' and adds a layer of collective training through which such meaning is perpetuated.

Early in the post modern period, the idea of the 'linguistic analogy', that architecture could be seen as a visual language, developed (Nesbitt, 1996, p.110). Semiotics used in this sense of architecture as a set system of signs and meanings becomes, however, a vehicle for the perpetuation of the dominant ideology (Agrest & Gandelsonas, 1996, p.114). The reason for this is that it assumes the meanings and interpretations of the ideology in power and reinforces them continually in the production of the built environment.

In addition to this, one has to consider that language, on which the tenets of semiology are based, is a fixed system, based on a social contract (Nesbitt, 1996, p.110). Broadbent (1996, p.133) argues that no such contract exists with regard to the meaning of archi-

tecture. He argues that meaning is based on cultural systems and therefore, in addition to differing between various cultures, is subject to change over time.

The concept of the 'sign', as an entity outside the semiotic system, can however be useful in the discussion on the expression of meaning. Saussure's concept of the sign is a two-part entity, signifier and signified, which is united by a social contract (Broadbent, 1996, p.133). Broadbent (1996, p.133) states that the idea of a signified which is given significance was already established by Vitruvius as being relevant to architecture.

What remains important in this discussion is the fact that the meaning of the signified, or symbol, has to be learned (Broadbent, 1996, p.135). Bonta (1979, p.138) states that when a work, symbol, departs from 'culturally established patterns', it requires clarification. He states that meaning has to be verbalised. There is therefore no inherent meaning in architectural expression, but rather learned meanings that are culturally dependent.

The symbolic relevance of architecture to certain cultures can be seen when looking at Egyptian and Greek examples. Roth (1993, p.166) describes Egyptian architecture that contained symbolic reference to the Nile. A long corridor ending in a broader chamber relating the culmination of the Nile in the broad delta. The columns for which Greek temple construction is known, are similarly believed to represent the sacred groves where offerings had been made previously. Roth states that the architecture seems to have become the concrete form of the ritual.

The danger exists that architects make use of analogy instead of symbolic reference. Joubert (2007, p.7) states that analogy is often too literal and even verges on banality. Jencks (Broadbent, 1996, p.137) supports the viewpoint that analogy tends toward the banal and describes it as too simple and boring. Steyn (2006, p.44), in his discussion of indigenous African architecture questions the relevance of traditional forms, and raises the possibility that it belongs, instead, to the realm of historical artefacts.

The expression of meaning in architecture should rather be aimed at deeper, more subtle meanings. Broadbent (1996, p.137) uses the example of the Casa Battlo of Antoni Gaudi as a metaphor with a meaning beyond that of the simple allegory. He states that the building is an expression of Catalan nationalism, referring to the slaying of the dragon of Castille by the patron Saint of Barcelona.

There seems to be a general consensus that the symbol and the metaphor are containers of a deeper, more subtle meaning that is based on a social contract, or for which a collective learned meaning exists.

ii. Image and meaning

Palasmaa (2005) bemoans the ever increasing dominance of the eye, and vision, over the other senses in the understanding and expression of architecture. This dominance can be related to the development of technology, including the camera, video camera, television and all technology related to the reproduction of the image. De Certeau (in Palasmaa, 2005, p.17) states that everything is measured by its ability to be shown, and that communication tends to be changed into a visual journey.

The main critique is not against vision itself, but firstly in the loss of meaning through mass production. Berger (1972, p.19) states that initially a painting was essentially part of the environment that it was located it. The experience of the visual was therefore

dependent on a broader set of sensual experiences. Through mass production, images are now viewed independent of setting and its additional meaning. He states that it is no longer the meaning of art that is important but instead the fact of its originality.

Palasmaa (2005, p.14) adds to this loss of meaning the fact that such reproduction leads to a loss of emotional involvement. There is no longer the need to participate. Palasmaa (2005, p.17) talks of the bodiless observer. The observer is detached from its relation to the environment. There is no longer a supporting set of sensual qualities to enrich the meaning of the visual. He states that architecture has turned into an image product, that there is no longer a spatial experience. Buildings are located in the 'cool realm of vision'. Lipman (2003, p.3) describes these buildings as indifferent moments. He implies a meaninglessness which is perpetuated through the use of meaningless 'signs and symbols stuck on'.

iii. Experience

Palasmaa (2005, p.26) states that the combination of the isolation of the eye and the suppression of the other senses reduces and restrict our experience of the world. He goes on to say that, in fact, the eye weakens the capacity of participation with the world. The ability to relate to the world and to place ourselves in the world, including social relation, is weakened (Palasmaa, 2005, p.13).

At the start of this chapter, it was noted, that Heidegger stated that the world should be understood through 'how it seems to us through our own experience'. It is this experience which is limited by the isolation of the eye from the other senses.

Walter Ong (in Palasmaa, 2005, pp.14-15) points out that the dominance of the visual was a result of the shift from the oral traditions to written speech. He states that print replaced the dominance of sound. The development of scientific methods to capture and conserve knowledge and meaning also lead, eventually, to the loss of meaning through mass production.

The return to an authentic experience of meaning and knowledge seems to be dependent on a complete sensory experience. Palasmaa (2005, p.27) talks of the integration of sensory experience by the body. He relates this sensory experience by the body back to the question of being, through the constant interaction between our bodies and the environment. This argument is supported by Heidegger's model of human experience and how we relate to the world.

Palasmaa (2005, p.8) further states that cultural practice is susceptible to experience in space and time. He says that cultural practice includes representation in space of human experience. Sensory experience, therefore, seems crucial to the understanding of the world and culture and relating to it.

Architecture can strengthen the experience of being in the world by the use of material, space, scale and engagement of the senses. Travis (1991, p.10) states that architecture is not an abstract thing. It is life, implying the sensory experience of being in the world and being in relation to the community.

Light and darkness

Light has become a quantitative element in architecture (Palasmaa, 2005, p.33). Windows are relegated to percentages of rooms and lighting levels and according to Palasmaa (2005) have lost its ability to indicate deeper meanings. He states that shadows and darkness are essential firstly because it dampens the dominance of vision.

The power of sound and the spoken word becomes

more significant. Palasmaa (2005, p.32) states that thought is allowed to travel and encourages the development of imagination. He states that Alvar Aalto's Saynatsalo Town Hall creates a 'mystical and mythological sense of community'.

The presence of shadow, and dim light, give more life to light and its quality to illuminate and place focus (Palasmaa, 2005, p.33).

Sound

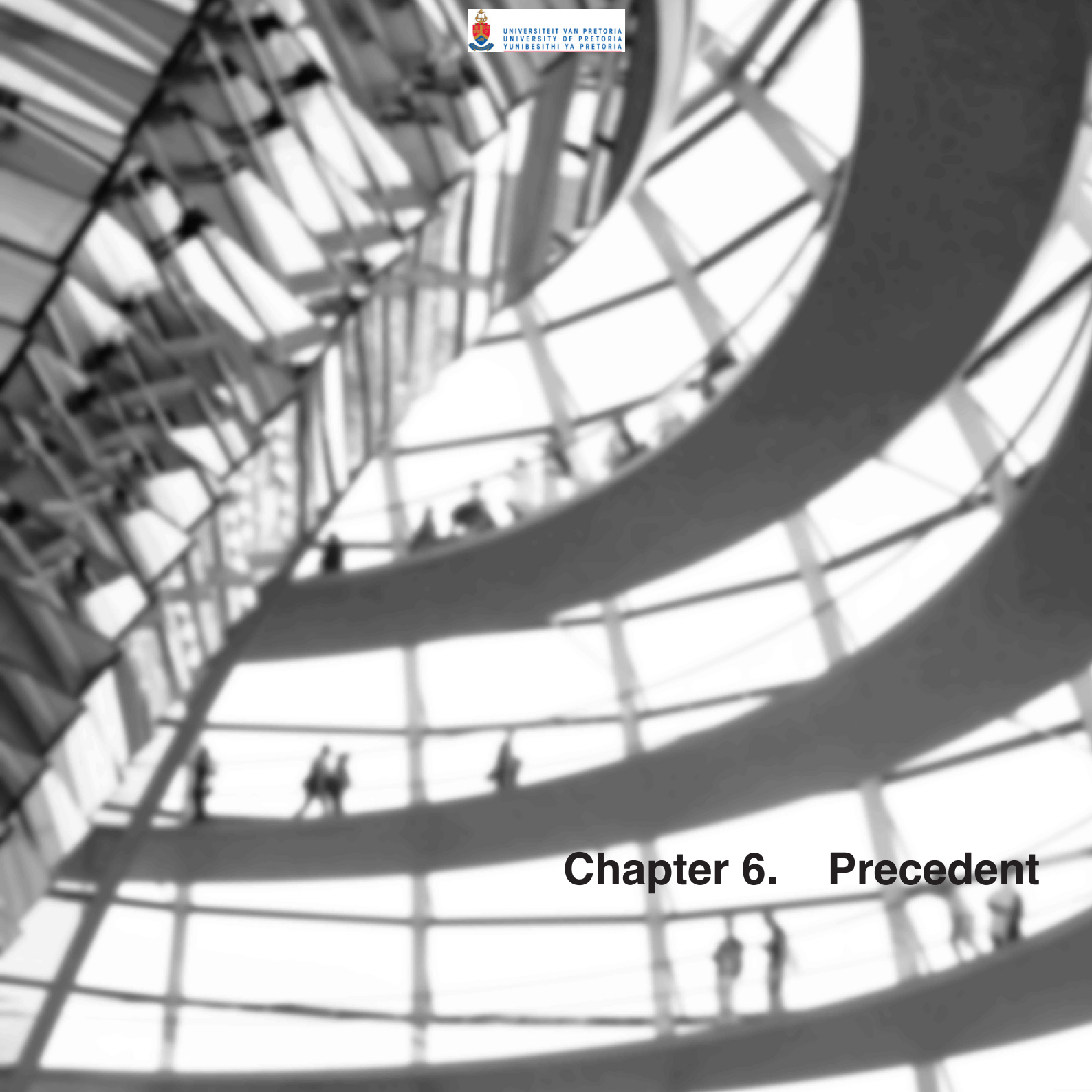
The inherent qualities of sound cause it to be seen as inclusionary and links it to concepts such as connection and solidarity (Palasmaa, 2005, pp.34-35). Sound is omnidirectional and carries further than light, and often, vision. It is as often the absence of sound as it is a certain sound quality that contributes to a powerful experience.

iv. A sense of place

In the experience of Heidegger's fourfold elements, an understanding of and adaptation to place increase the relation to the world, to earth and sky. In a discussion of the construction of Skiddaw House and its adaptation to the local climate, Heidegger states that the building can be read as a certain way of understanding the world around it (Sharr, 2007, p.10). The building responds both to the place and its inhabitants, what Heidegger calls physical and human topography.

Lipman (2003, p.3) places similar emphasis on the combination of relating to both the physical and social climate or context. The understanding of the light, climate and the shape and pitch of the land give architecture a rootedness in the world. In Africa architecture is challenged to deal with intense day-time heat and cold night-time temperatures as well as desert winds and torrential rains (Hughes, 1994, p.76). It is a place of opposites, extremes, and this is reflected in materials, such as masonry, and architectural elements, such as creative shading devices. Lipman (2003, p. 6) states that architecture 'springs' from the nature of the materials. It is about space, light and organisation. In this sense it responds to both the physical and social needs of the occupants. Lipman reiterates the importance of architecture as a social entity.

Pretoria has a history of adaptation to climate and place, evidenced in architectural movements such as the third vernacular and Brazilian Modernism (Fisher et al., 1998). These architectural movements, however, seem to indicate a strong relation to the world but a weakened relation to culture. Joubert (2007, p.15) is hopeful that contemporary architecture will reassert a design tradition that is sensitive to both the physical and social, or cultural, context.



Chapter 6. Precedent

1. Constitutional Court

Johannesburg, South Africa

i. Relation to the investigation

The (civic) building was commissioned by the Department of Public Works, with one of the main expressed aims that it become a symbolic space for all South Africans.

ii. The building

The building aims to depart from the monumental scale associated with traditional civic buildings. Instead the building's stature is derived from its location. The history of the site and the relation of the new use to it, creates a place of extreme significance to South Africans.

The re-interpretation of the tree, a significant element related to processes of decision-making in an African context, becomes a strong feature in the foyer of the building.
The entrance is clearly indicated and visible from the square.

iii. Lessons to be learnt

Although the reinterpretation of the tree is well designed, the symbolic significance is lost by its disassociation with the decision-making process.

Although this building is accessible from the square, said square is located in the centre of the Constitution Hill complex, which makes it less accessible, requiring previous knowledge of its location.

2. Mphumalanga Legislature

Nelspruit, South Africa

i. Relation to the investigation

The Mpumalanga Legislature was the first major civic building commissioned by the democratic government.

ii. The building

The building has a strong relation to its environment. The layout of the complex follows the contours and the building makes use of views across the Olifants and Nels rivers. It is a facebrick building, lending a grounded quality to the complex.

The chamber of parliament is located where the administrative and legislative sections of the building meet, lending it a sense of importance.

iii. Lessons to be learnt

The building is related to its physical context, but has a more tenuous relation to the cultural context. In terms of the use of space, smaller scale courtyards exist throughout, but the main space around which the complex is organised disappointingly becomes a parking facility.

The significant spill-out space becomes an exposed afterthought on the side of the chamber of parliament.

Figure 28: Entrance to the Constitutional Court (opposite, left)
Figure 29: Foyer space Constitutional Court (opposite, right)
Figure 30: Public Square Mpumalanga Legislature (below)
Figure 31: View toward Chamber of Parliament, Mpumalanga Legislature (right)

3. Northern Cape Legislature

Kimberley, South Africa

i. Relation to the investigation

The Northern Cape Legislature was commissioned by the National Department of Public Works, with the intention of becoming a 'highly visible, practical and symbolic manifestation of democracy" (Freschi, 2006).

ii. The building

As with the Constitutional Court, the site contributes a large portion of the symbolic significance of the the project. The complex is located on what was during the Apartheid era as a buffer zone. The occupation of this space, linking together the segregated city, is a strong statement of democracy and inclusion.

The main aim of the design was to break 'decisively' from European prototypes (Freschi, 2006). This was to be achieved by the inclusion of Chris Van den Berg, artist, into the design team. The building was intended to become a sculptural work and thereby departing from the monumentality associated with civic buildings.

iii. Lessons to be learnt

In the search to break away from architectural styles associated with Colonialism and European models, the building became a study in post-modernism, which is a strongly western-based stylistic influence. Its association with movements such as nihilism causes one to question whether it really has the capacity to express the complexity of the African Democracy.

The artistic influence has lead to a sculptural work, and in that sense has achieved the goal of avoiding the monumentality of classic architecture, but the artistic influence often seems merely decorative.

Figure 32: Public square at Northern Cape Legislature

4. Jewish Museum

Berlin, Germany

i. Relation to the investigation

The Jewish Museum was commissioned with the intention of containing a very specific meaning.

ii. The building

The building does not contain analogous representations of war or concentration camps, instead it achieves the memory of the holocaust by the creation of experiential spaces, eliciting feelings and emotions associated with concentration camps and the holocaust.

iii. Lessons to be learnt

The building does not relate well to its context. In terms of definition of space and relation to the street it becomes a foreign object in its landscape.

Figure 33: use of sound and texture (below left)
Figure 34: use of light (below right)

5. Reichstag

Berlin, Germany

i. Relation to the investigation

The renovation of the Reichstag was commissioned by the German Democratic Government with the intention of representing democracy.

ii. The building

The original facade was maintained with extensive use of glass used in the interior of the building, ensuring that the democratic process is accessible whilst protecting and building on the historic significance of the site.

iii. Lessons to be learnt

Although the building is located on a large urban open space, the traditional monumentality of the building isn't intentionally accessible.

Figure 35: transparent interior, visible council chamber
Figure 36: Copula

6. Rachel Whiteread

i. Relation to the investigation

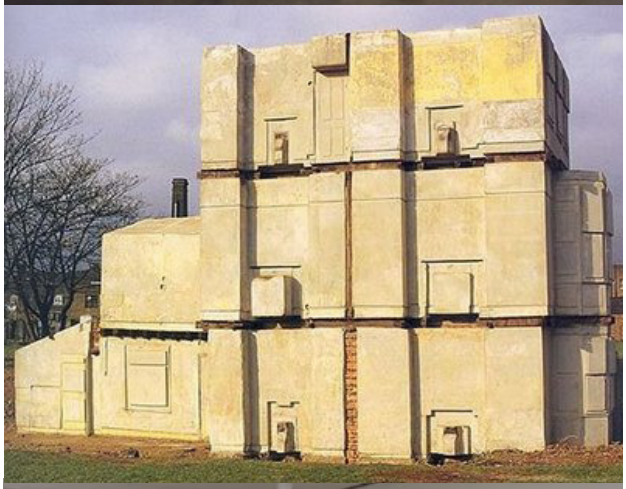
Rachel Whiteread's work questions the perception of space.

ii. The project

Whiteread manages to renew the viewer's perception of space. Her projects express space as a central object rather than a mere by-product.

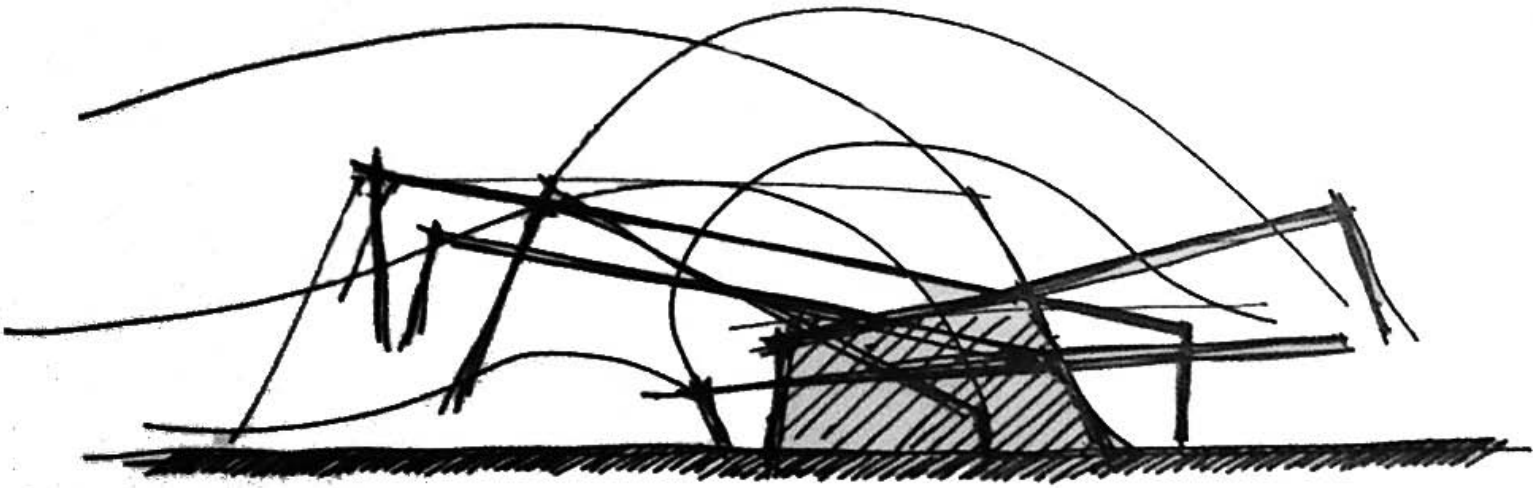
iii. Lessons to be learnt

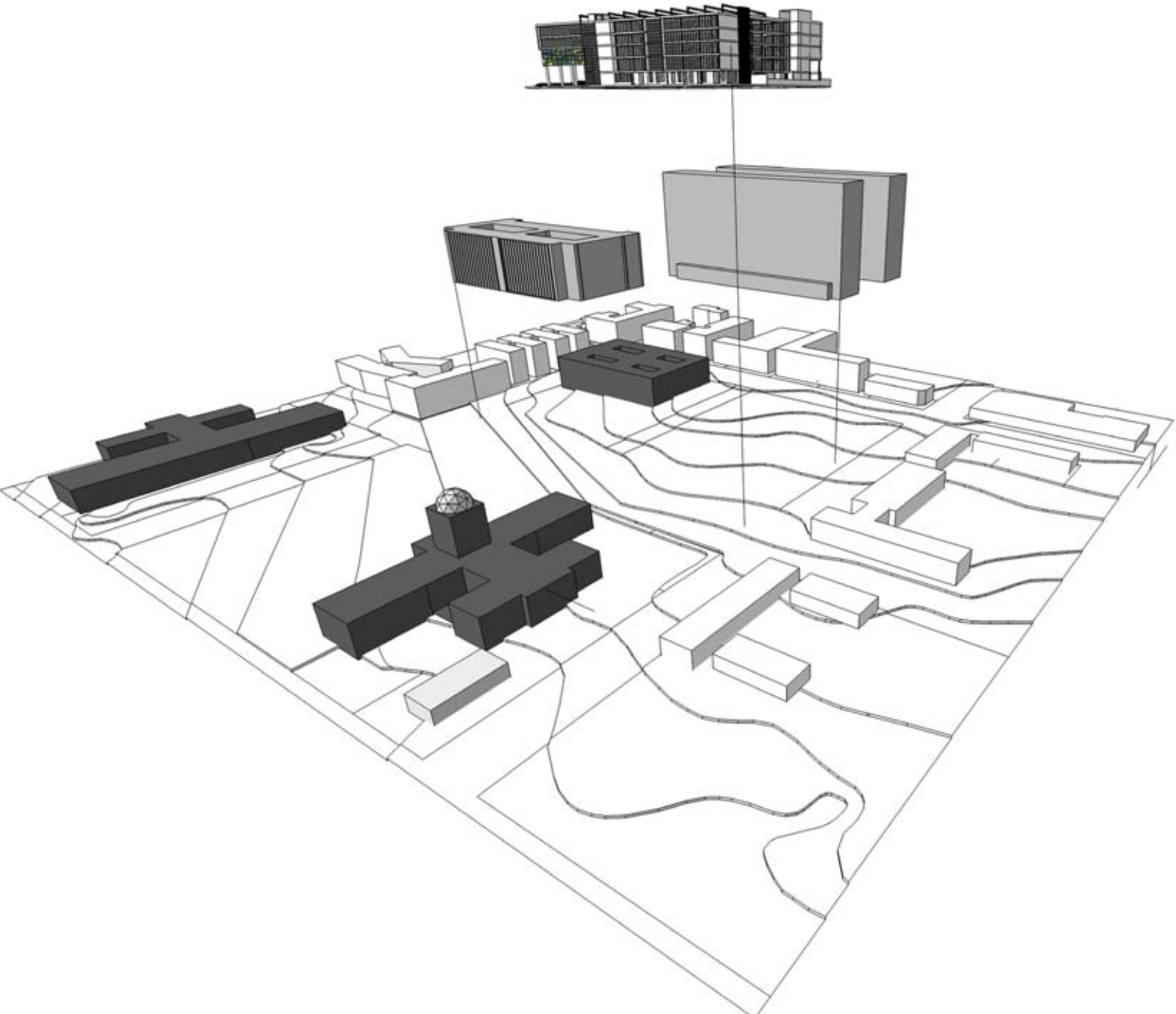
Space should be considered as an object to be designed, rather than an undefined element determined by the creation of built fabric.



Selected works of R. Whiteread from top to bottom
Figure 37: Cabinet of Curiosities
Figure 38: House
Figure 39: Library

Chapter 7. Design Development





1. Introduction

The intention of this project is to reiterate the role of government buildings to capture meaning, and to explore the expression of the concept of a 'democratic African identity' within the context of a capital city.

The project is firstly based on the consolidation of the Department of Home Affairs on an existing urban block. It explores how Government should present itself to current and future generations, both on an urban and an architectural scale. In this sense the project considers the question of accessibility, inclusivity and layering on an urban scale, whilst reacting to the expression of domination of government buildings related to previous ideologies.

It is the intention that the project should add a layer of symbolism and memory to the square, and on a broader level to the capital city. The aim is to underline the importance of adding new layers of symbolic significance and memories to the capital city, whilst maintaining the old, in order to remember where we come from and celebrate how much we have achieved.

2. Urban concept

i. Symbolic public space

The project starts on a larger scale with the consolidation of the Department of Home Affairs on a city block. At the city block level the intervention has to deal with the relation of the intervention (and symbolically of the Government) to the city, and more specifically to the public urban space, Pretorius Square.

As stated earlier in this document there is a history of a more subtle approach regarding the relation between Government and people, or government buildings and city. The fact that the Union buildings do not dominate one of the main axes of the city attests to this approach.

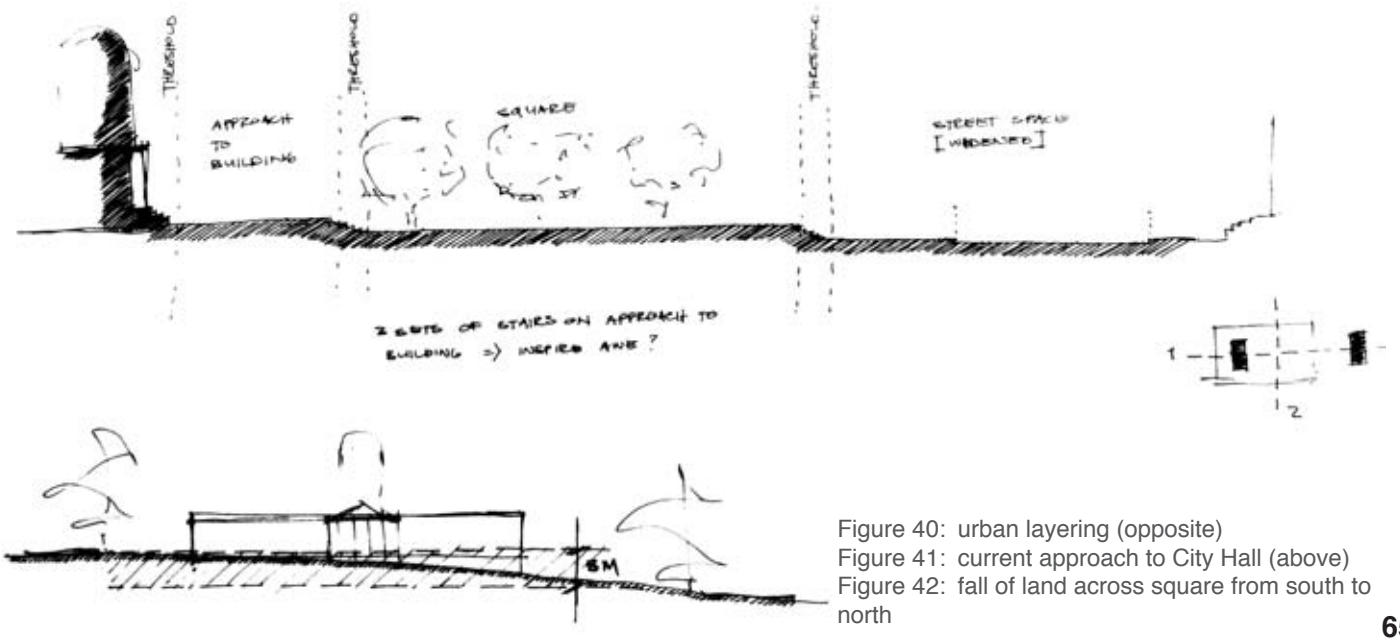


Figure 40: urban layering (opposite)
Figure 41: current approach to City Hall (above)
Figure 42: fall of land across square from south to north

In a similar way the new headquarters building does not dominate the public square, but rather aims to complete the definition of the square and add a layer of meaning and function to this symbolic space.

Making use of the contours of the square, an urban stairway is created, subtly redirecting the orientation of the square and forming an approach towards the main entrance of the consolidated department.

The main elements of the current main axis (pedestrian approach to the City Hall with ponds and statues of Andries Pretorius and Chief Tshwane) are retained in order to maintain the memory of the past. The formality of the approach is however disrupted by stepping the elements in order to integrate it with the levels of the new stairway, thereby further weakening their dominance over the space.

On the southern edge of the square, along Jacob Mare Street, a market space should be provided that leads to the entrance of the proposed campus. Public parking facilities are provided along Jacob Mare Street and under the square.

ii. Urban campus

The question of what it means to establish a 'campus' to a government department was explored. It is essential for such a campus space, being that of a democratic government, to be perceived as being accessible, and secondly to be incorporated into the urban fabric.

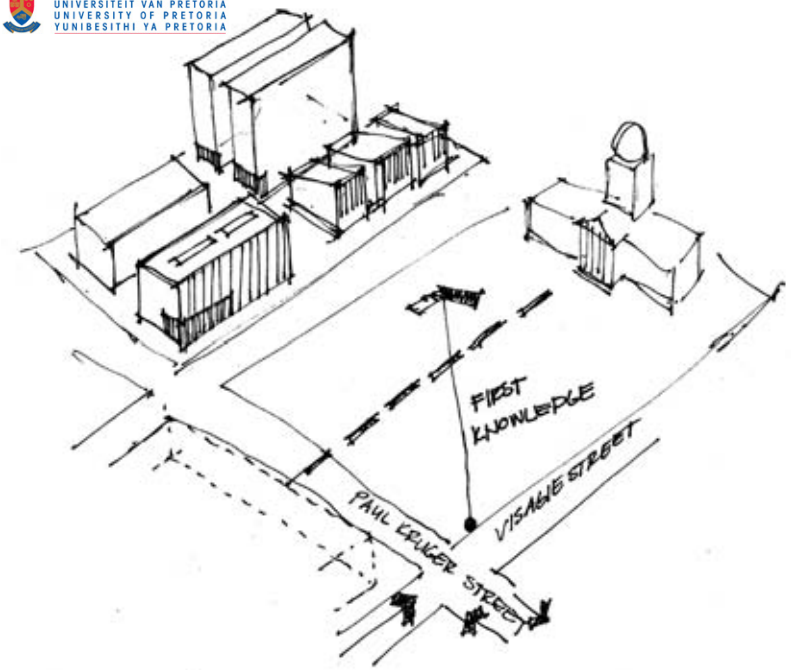


Figure 43: Sketch - campus viewed from northeast

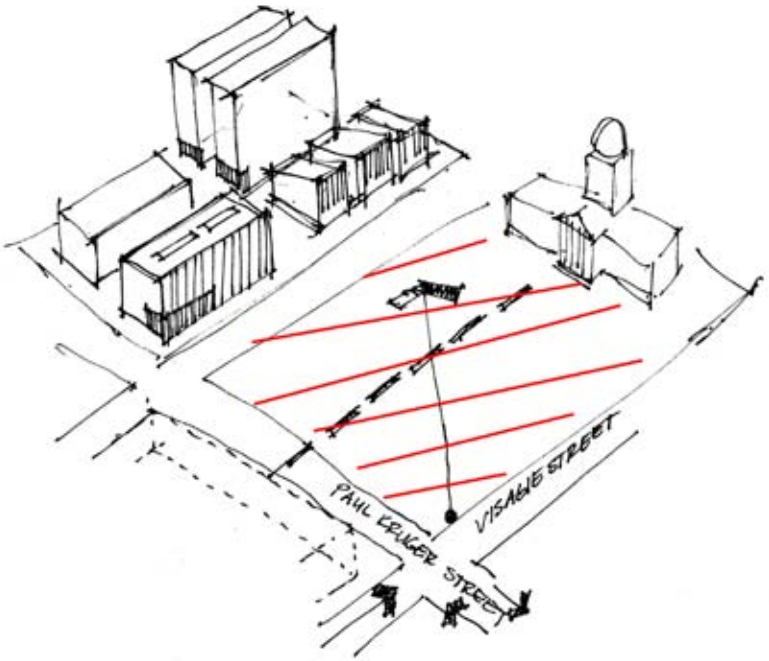


Figure 44: Sketch - campus viewed from southwest

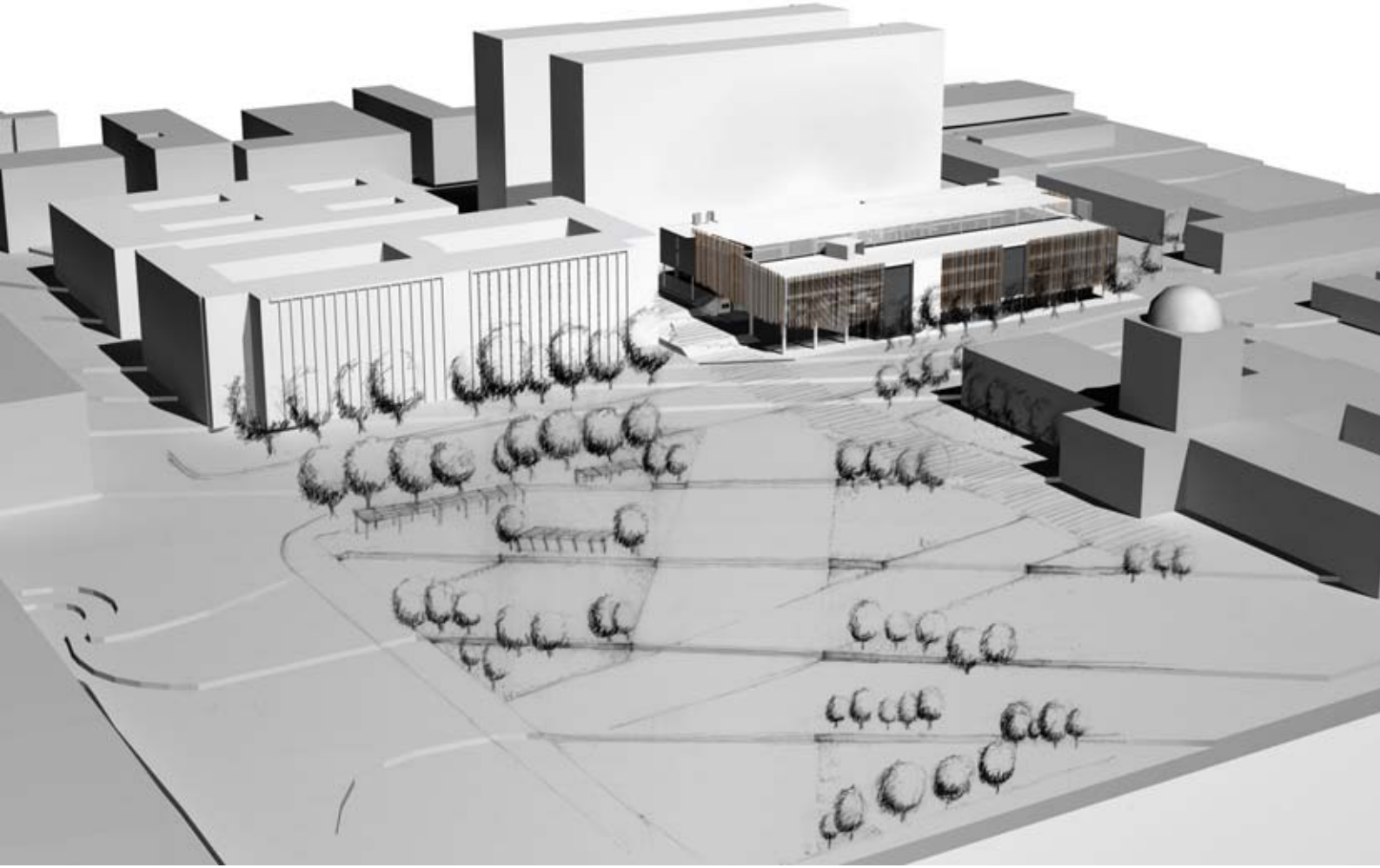
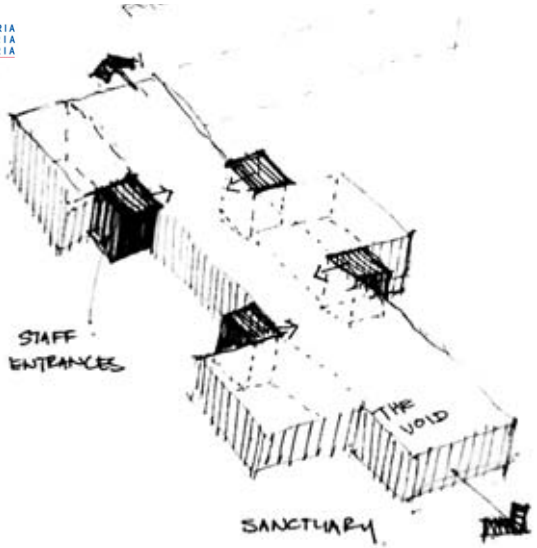


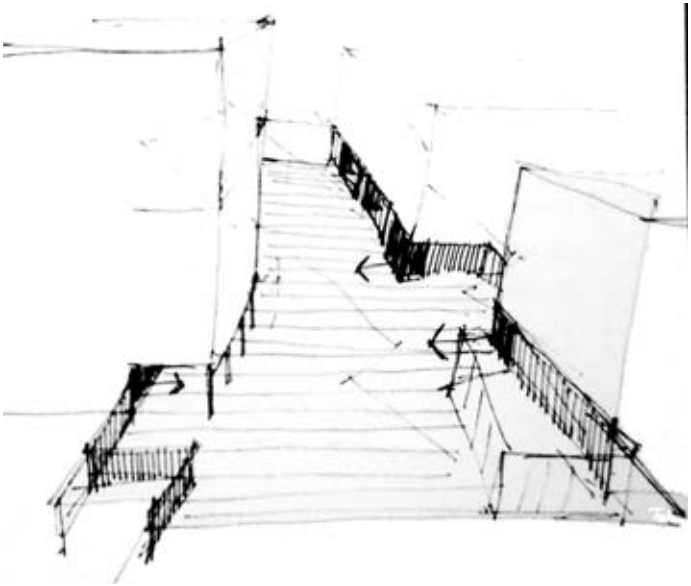
Figure 45: Urban stair

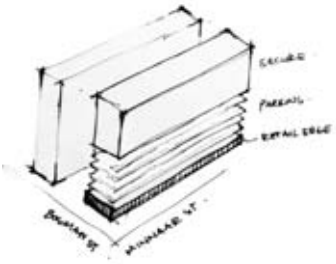
The department does, however, have a high security program. For this reason the public is guided through the site by a controlled, safe space. Entrances to the various buildings are created at the heart of this public walkway to increase internal accessibility and to ensure an overlap of public and departmental movement. The overlap of movement leads to the policing of space whilst underlining the accessibility of Government. High security courtyards are then created, which are accessed separately from this public function.

Further, publicly oriented functions (restaurant, small business retail space, creche) are cut into the buildings at the street edge and where possible along the public walkway, ensuring a public threshold between campus and the public space of the city, thereby integrating the department into the daily operation of the city.

The campus further incorporates the existing buildings, representative of architectural styles associated with previous ideologies, including neo-classical which is related to colonial government, as well as modern and late-modern buildings associated with the apartheid era, thereby symbolically building on what has been established and pointing to the inclusivity of the democratic government.







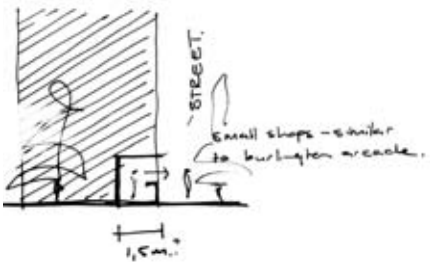


Figure 46: (Opposite) Urban campus for consolidated Department of Home Affairs
Figure 47: (Top) Proposed public walkway
Figure 48: (Middle) Proposed public walkway
Figure 49: (Bottom left) Proposed parking levels in New Corporation building
Figure 50: (Bottom right) Threshold treatment

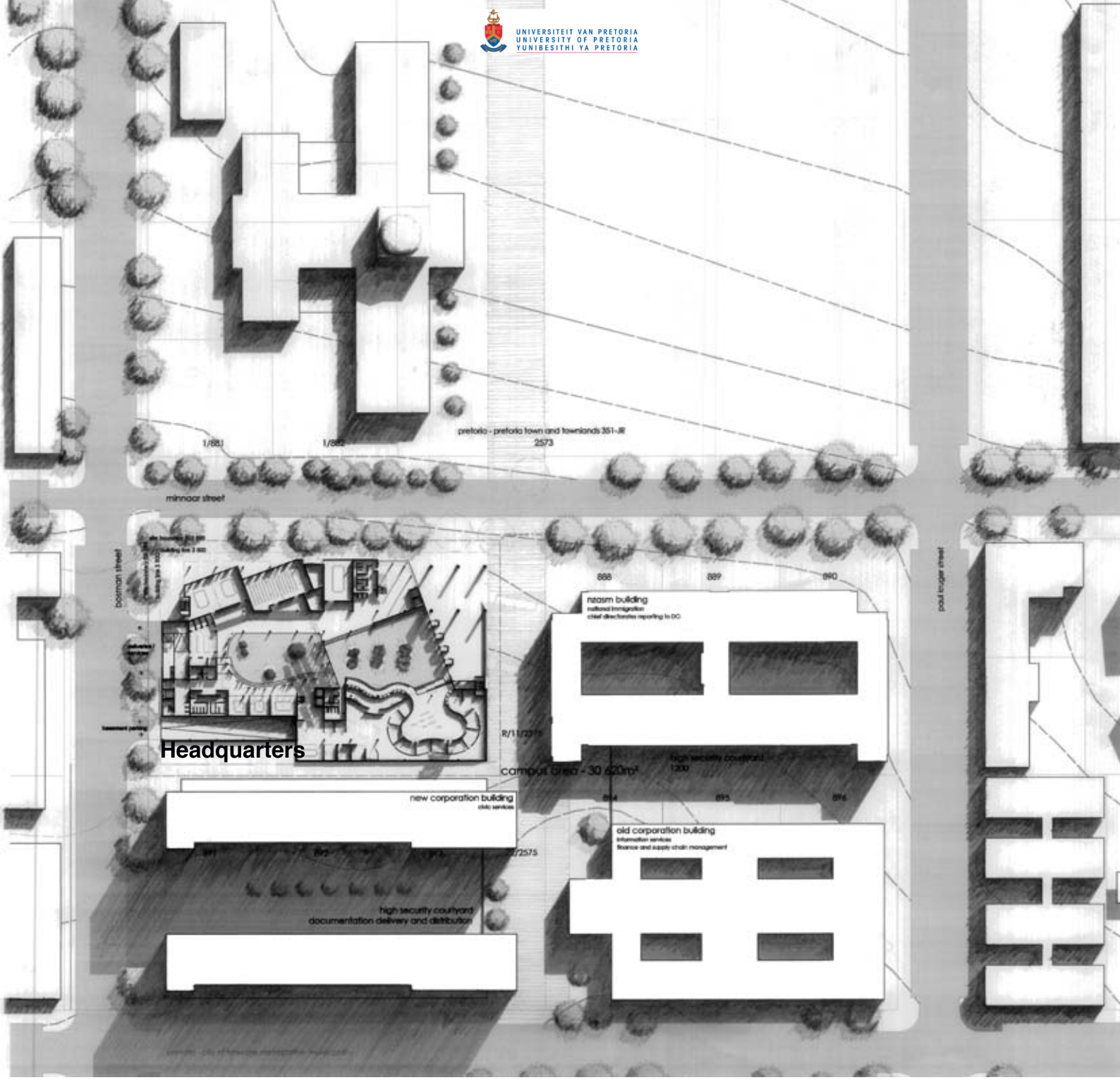
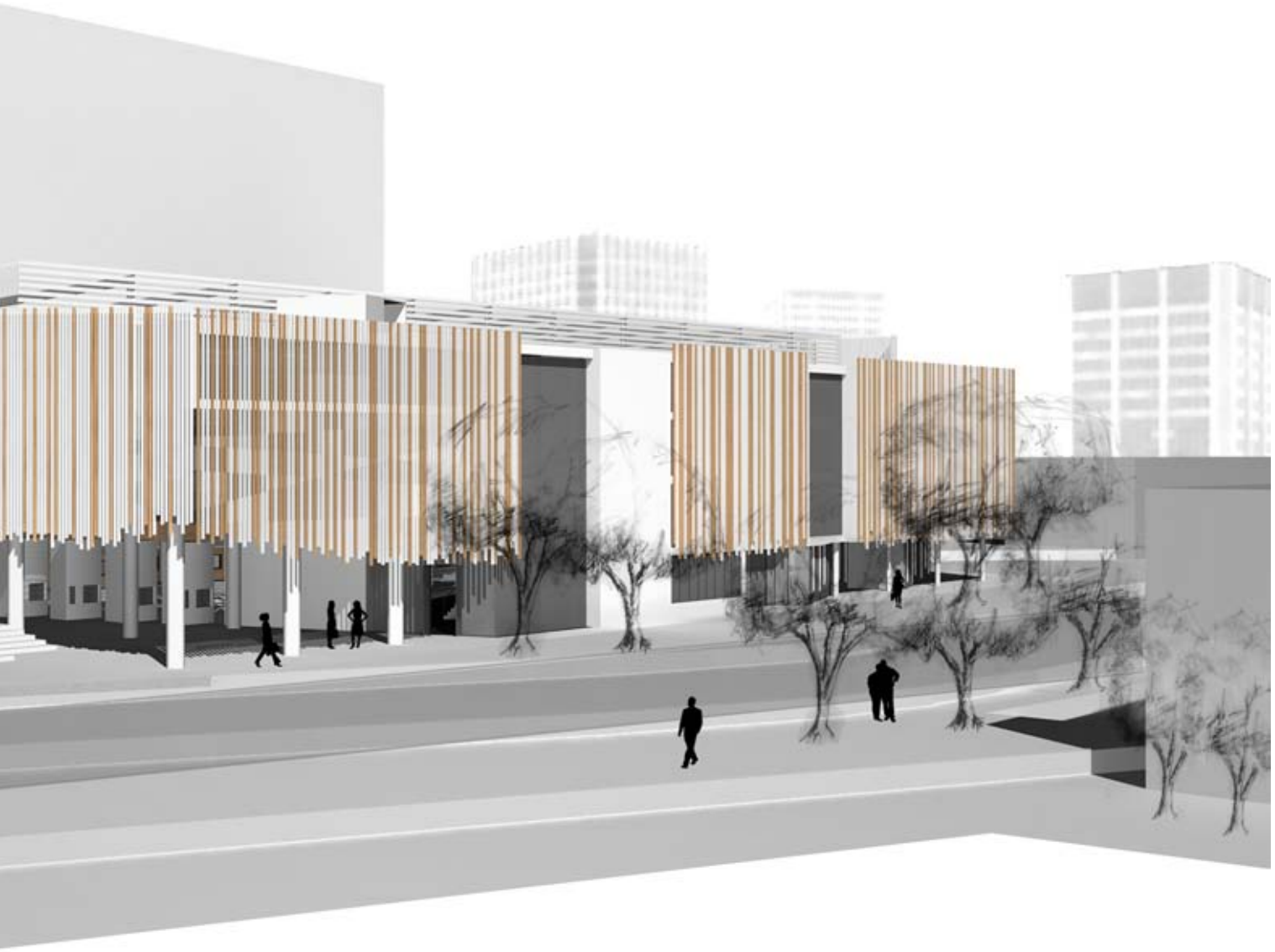

pretoria - pretoria town and townlands 351-JR
2573
minnaar street
bosman street
paul kruger street
888
889
890
nzasm building
national immigration
chief directorates reporting to DG
Headquarters
R/11/2575
campus area - 30 620m²
high security courtyard
1200
894
895
896
new corporation building
civic services
891
892
2575
high security courtyard
documentation delivery and distribution
old corporation building
information services
finance and supply chain management

Figure 51: Northeastern view of headquarters



3. Architectural concept

As stated earlier in this chapter the purpose of this project is the consolidation of the Department of Home Affairs in Pretoria. The space requirements for the department (see Chapter 3) determined the need for an additional building on the site. The analysis of existing buildings and requirements lead to the concept of the creation of a headquarters building on the northwestern corner of the city block.

This project is not about the creation of an architectural language which will perpetuate the dominance of government or western ideologies. Rather, it explores the concept of African democracy. In an attempt to simplify such an elusive question the problem is divided into the concepts of 'African space', democracy, and the function of the Department of Home Affairs.

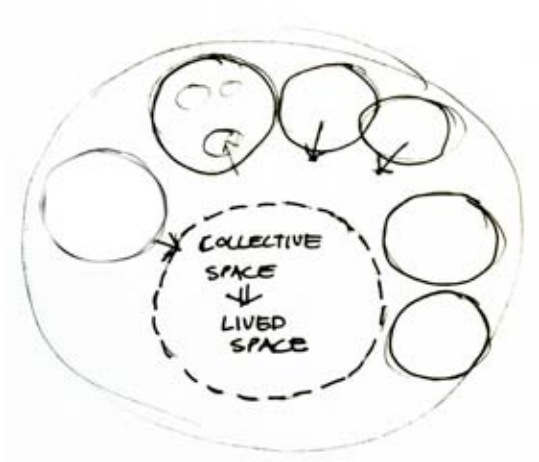


Figure 52: Collective central space

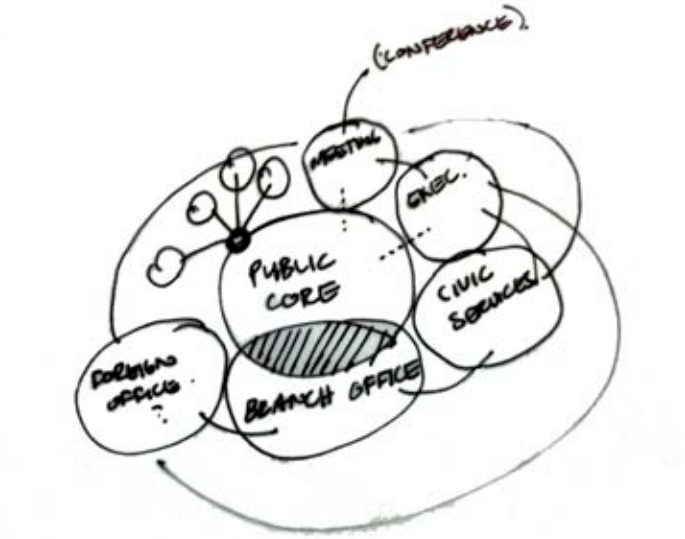


Figure 53: Organisation of department around collective space

i. African space

Making use of the literature study and precedent study as a point of departure, the dissertation poses that 'African space' is not defined by style, form or architectural language, but rather by the use and organisation of space. In an African setting the boundary between inside and outside becomes blurred, the outside space, courtyard or collective space becomes the lived space, the focal point of the settlement pattern. In the context of a public building the use of this concept becomes central to the design. In the urban context of the capital city, there are, however, limitations to the use of horisontal space, causing buildings to grow vertically. The central void space needs to grow vertically with this organisation of functions. Further the centrality of this space is often lost in contemporary buildings.

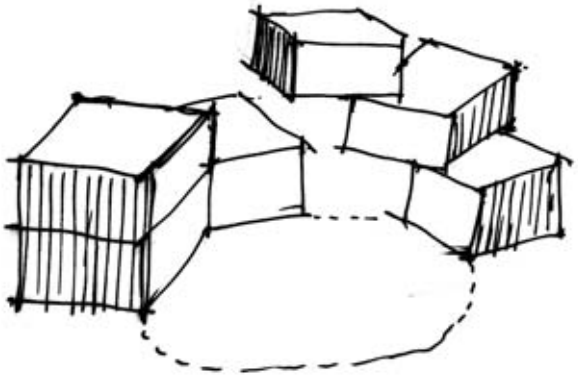


Figure 54: Vertical collective central space in urban context

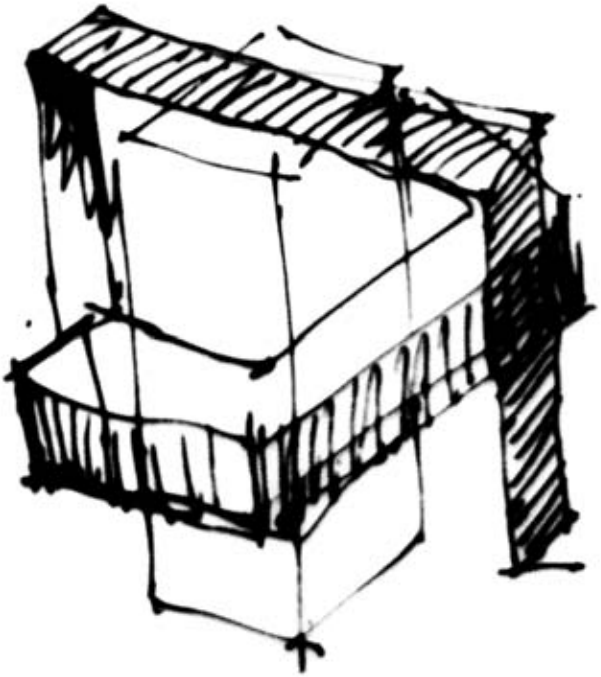


Figure 55: Three-dimensional central space

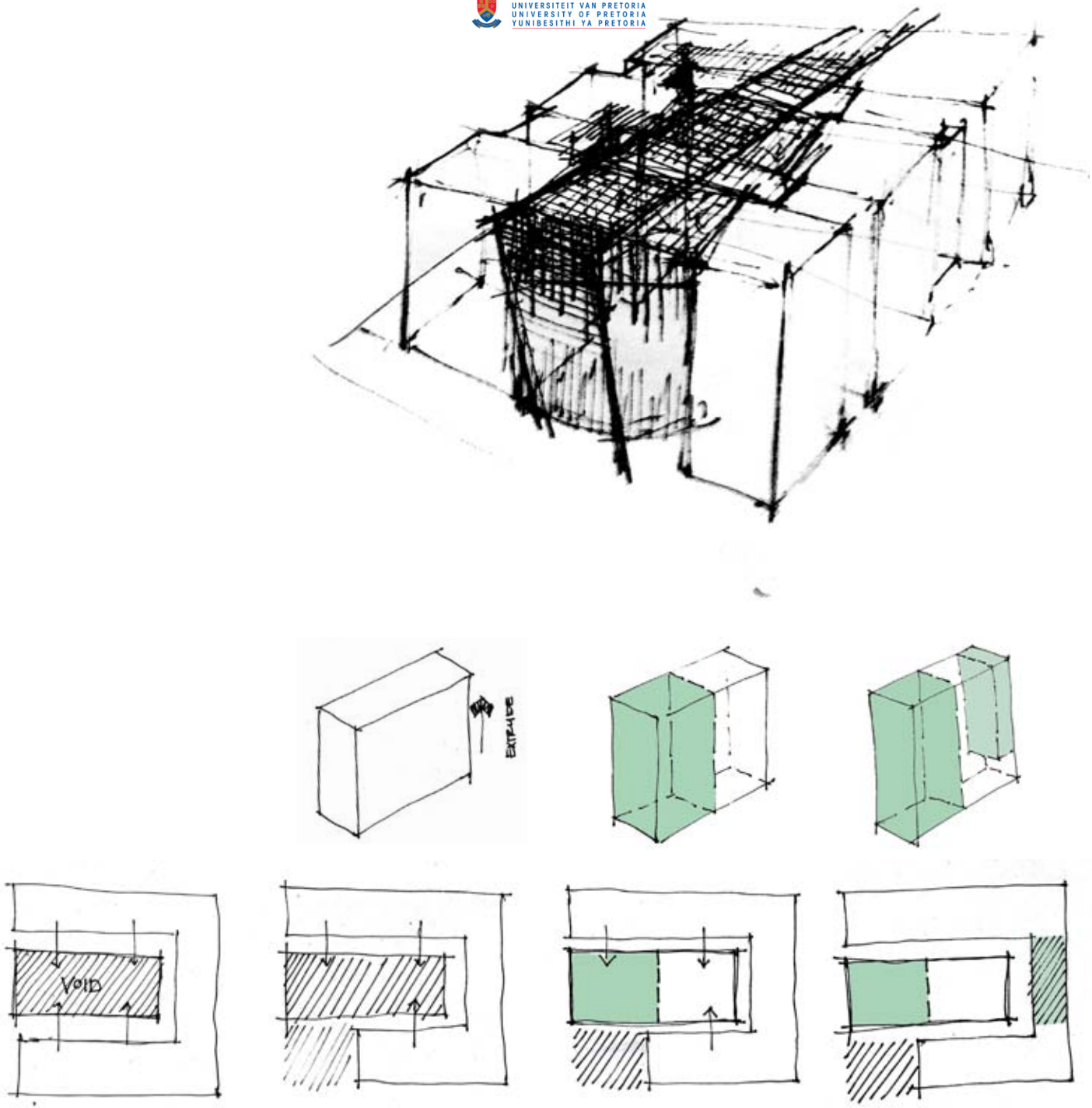


Figure 56: Conceptual development of central void space

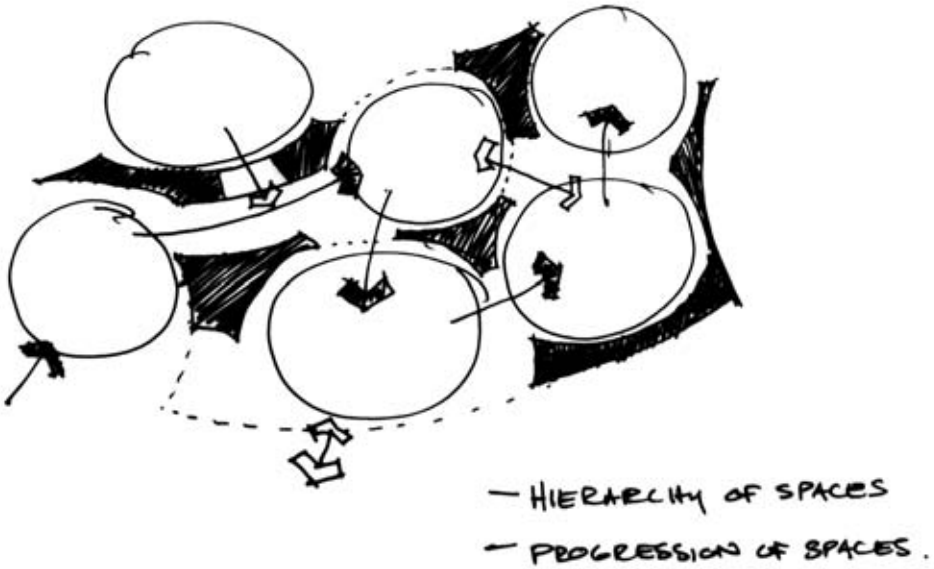


Figure 57: Progression of spaces

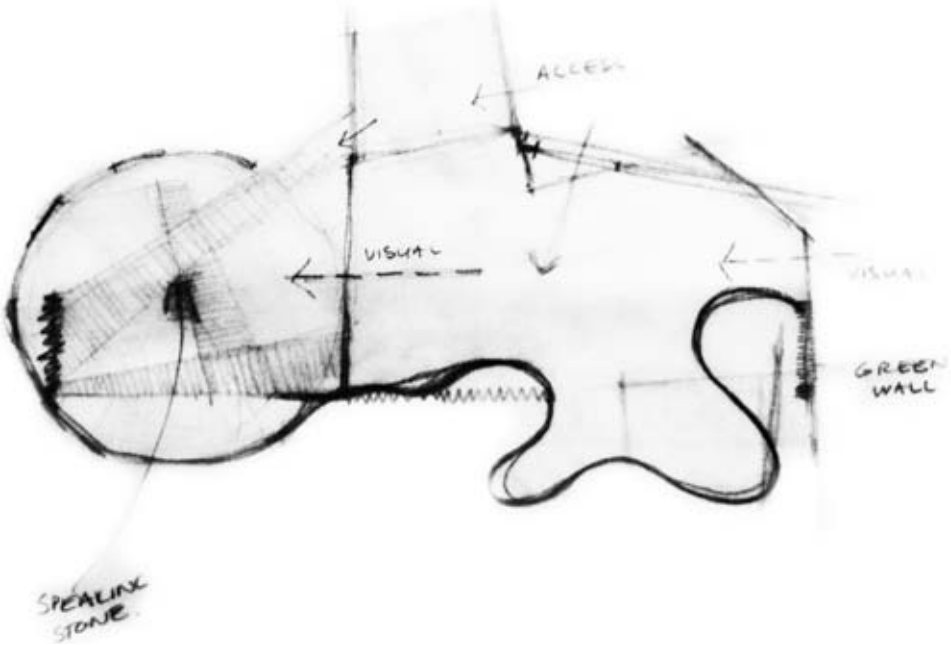
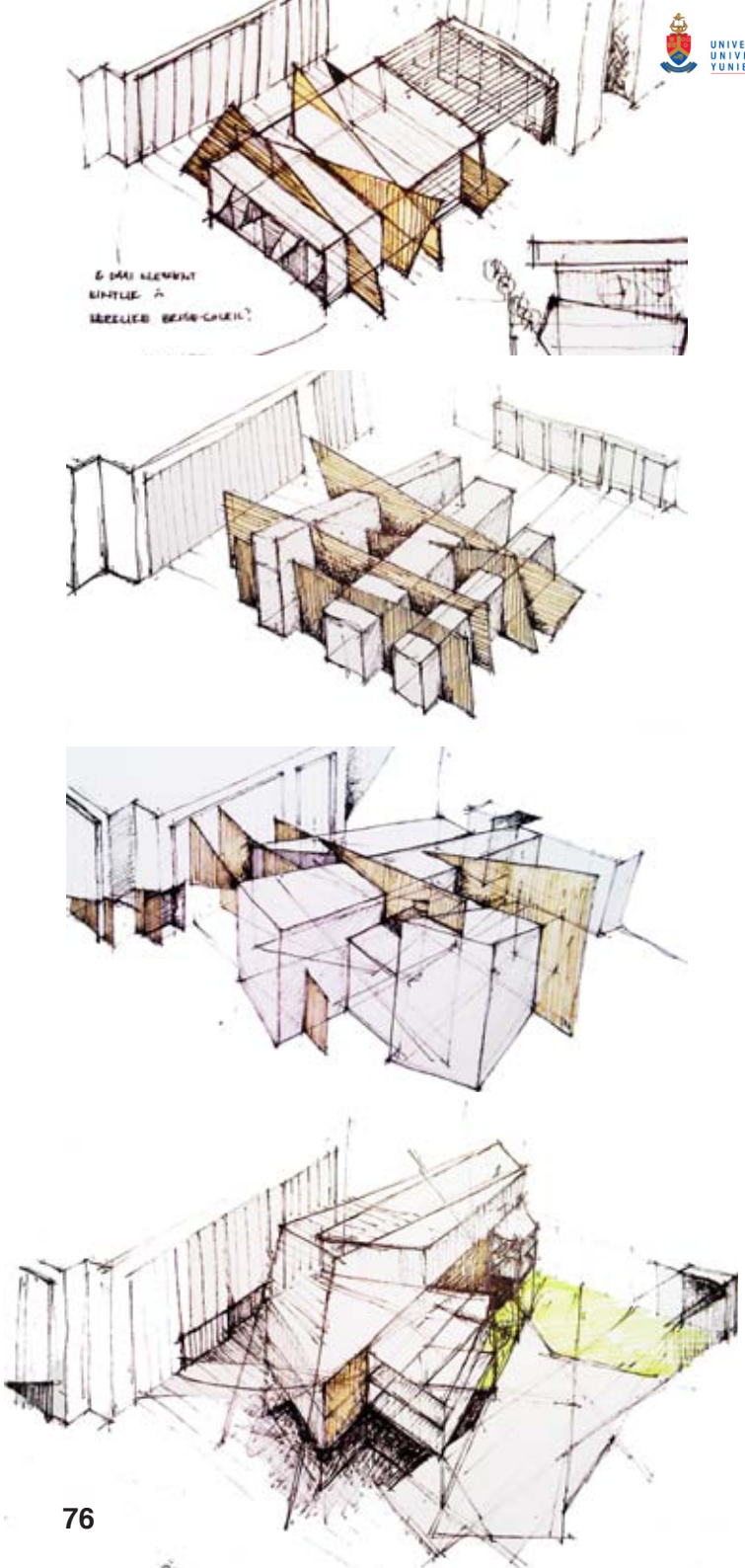


Figure 58: Organisation of void in hierarchy of spaces



The design therefore starts with the creation of the central ‘void’ space as a three-dimensional element around which all the functions of the building are organised.

Another characteristic of traditional settlement patterns is progression of spaces with increasing levels of privacy. This is translated into a progression related to security and access in the context of the public building. The building consists of a number of spaces with a variety of levels of access and function. The main public space is connected to the branch office and public interface of the department and is publicly accessible from the public square as well as the public walkway through the campus. That space is followed by the garden meeting-space, which is an ‘outside’ spill-over space for the meeting facilities of the department. This space is a semi-public space with controlled access. On a monthly basis it becomes a public meeting space, where the public may interact with officials in a democratic meeting where every voice may be heard. This space is followed by a private spill-out space linked to the Ministry on the first floor, overlooking the public meeting space.

These spaces form the central ‘void’ and focal point of the building, as mentioned before, and as such the surrounding functions link to these spaces through balconies and overlooking opening windows, which allow not only a visual connection but ensure an integration of space.

Figure 59: Initial massing development - related to surrounding buildings

ii. Democracy

In the political arena words like transparent government and accessibility are often used in relation to democracy. In architecture these terms have been directly adopted and visual accessibility and transparency are mostly achieved through the use of glass and curtain walling.

In the case of Pretoria (the core urban area of the City of Tshwane Metropolitan Municipality), buildings related to previous regimes and ideologies tend to appear solid and inaccessible. These buildings often have strong vertical elements to ensure domination of space, which is usually strengthened through the inclusion of a plinth. The facades are rigidly based on ordered systems and symmetry expressed through openings and shading elements.

In reaction to this, the proposed headquarters building mass is disrupted and broken into smaller elements with large sections of curtain walling to ensure visual integration between inside and outside.

Vertical elements are used in the facade, but are disrupted in order to undermine the dominance of that verticality. The arrangement of openings and vertical shading elements is further based on rhythm as opposed to the rigid ordered systems of the surrounding buildings. The articulation of the facade underlines both the disrupted massing of the building and the vertical elements. The main entrance strives to achieve a horizontal opening drawing the public space, at the street level, into the building and ensuring high accessibility.

Accessibility is increased by including the branch office, the main public interface of the department, into the headquarters building as the main function of the central 'void' space of the building. Hereby the public identity symbolically becomes the core focus of the

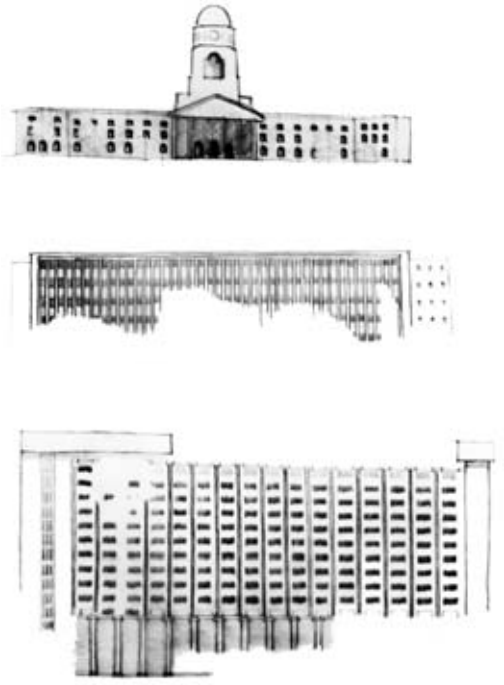
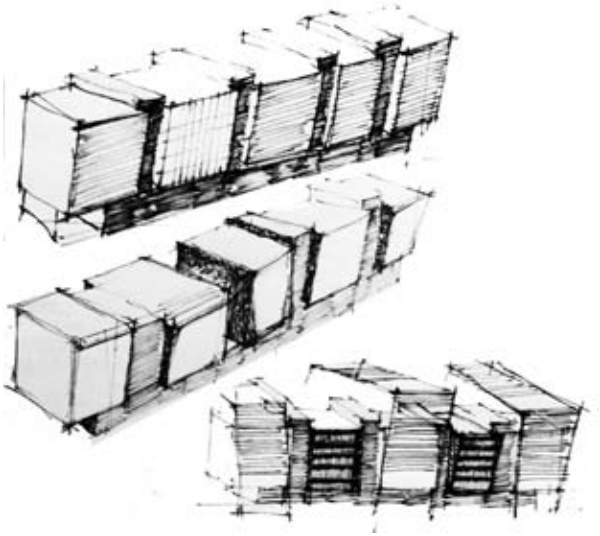


Figure 60: Sketches of verticality and solidity in surrounding government related buildings (above)
Figure 61: Disrupted massing of proposed building (below)



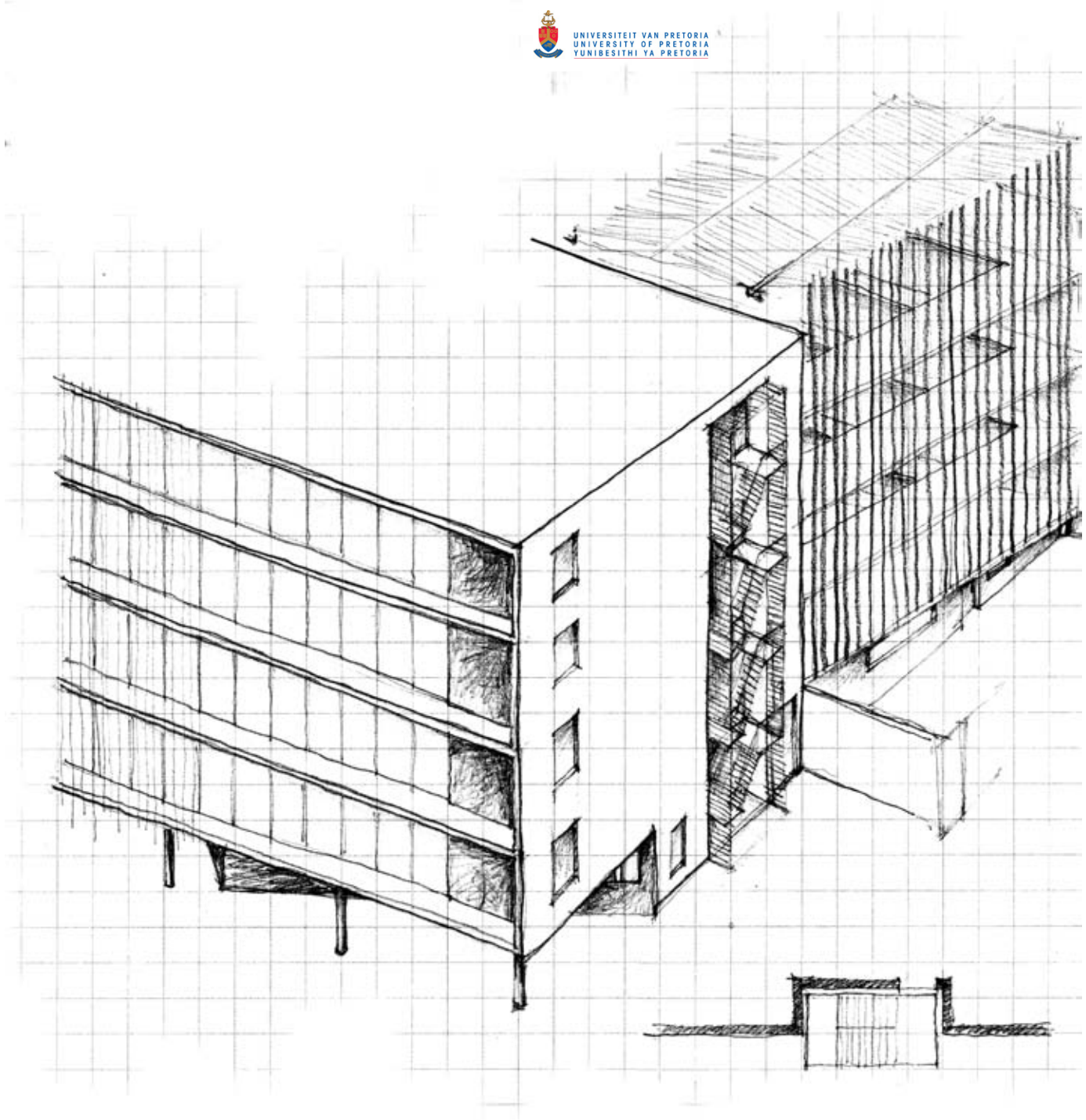


Figure 62: Cutting public space into building mass

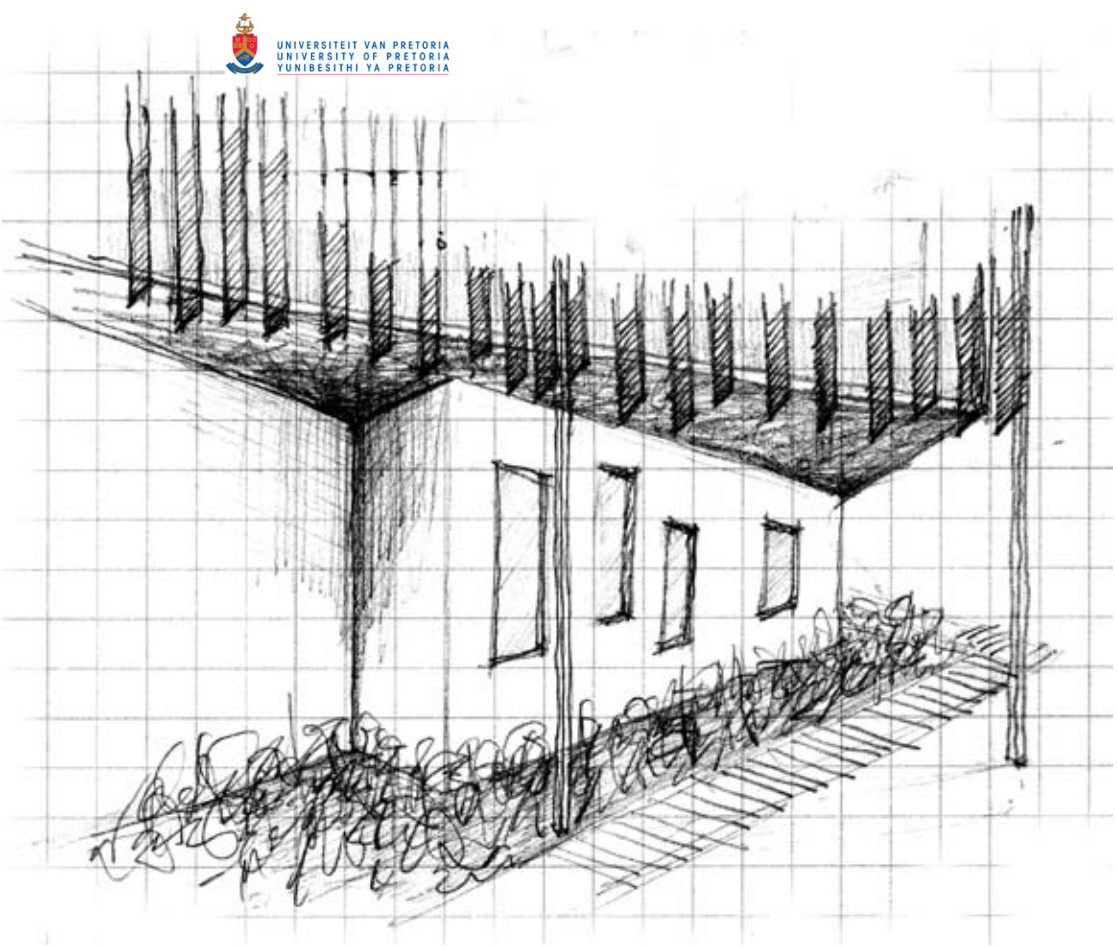


Figure 63: Vertical facade elements

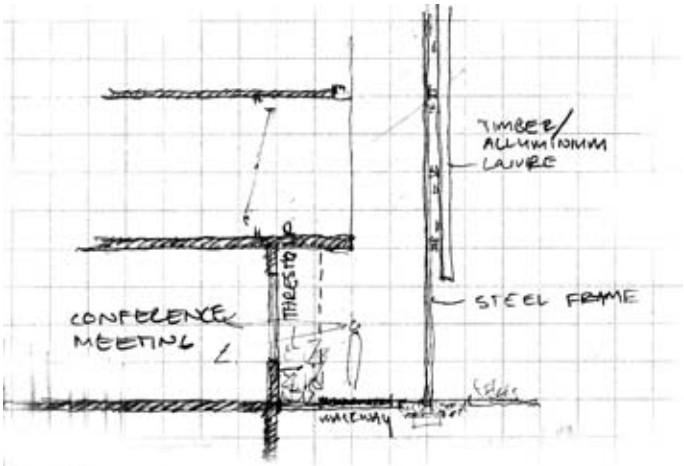


Figure 64: Increasing visual accessibility of conference facility

department. In addition the monthly public meeting in the semi-public space within the building further increases the accessibility of the building as well as the department.

iii. Department of Home Affairs

The Department of Home Affairs deals directly with the question of identity. Its main mandate may be divided into two missions: firstly to determine the status (identity) of individuals, and secondly 'to protect the national integrity'.

In this sense the department deals with the existential question of being. As indicated in the literature study Heidegger claims that the natural environment contains reminders of earth, sky, divinities and mortals around which we orient ourselves as beings and understand who we are. In an African context the relation to 'mortals' or the community within which we exist takes precedence over the other three elements that Heidegger mentions. It is, therefore, in our relation to and experience of those around us, that we understand who we are.

The project thus aims to introduce natural elements to the 'void' space, creating a garden sanctuary. The aim was to create a garden-like environment in which people are exposed to natural elements that contain reminders that help people to understand their place in the larger context and provide an opportunity to contemplate existential questions. Additionally, it is the intention that the sanctuary will provide a calm and restful waiting environment to negate negative emotions usually associated with queueing and waiting areas.

In order to ensure an awareness of the surroundings the project aims for the 'void' to be an experiential space. As mentioned in the literature study, Palasmaa states that the isolation of the eye and the suppression of the other senses restrict our experience of the world. The intention is, therefore, to restrict the dominance of the eye as the building is entered, in order to give other senses an equal importance and create a more sensual experience. This is achieved through muted lighting and the creation of a cave-like space where sound, specifically sound created by people in that space, echoes. As one enters the garden sanctuary this echo dissipates and one is surrounded by a textured sanctuary with dappled light. Sound and light qualities of the different gathering spaces differ due to materiality and enclosure.

The second mandate of the department is the role of protector of national identity, which is based on the identity of the people. The building therefore provides a secure space for the determination of identity, physically surrounding the public interface and drawing this public space into the protected courtyard of the building.

It is the intention that the new building should draw together the department and serve as the main focal point and public face of the campus. The building will functionally draw together the department through the creation of inter-departmental meeting spaces and conference facilities. These meeting spaces are organised around the central 'void' space, thus ensuring a close relation and awareness between the function of the department and the public identity.

A client services centre located on the eastern elevation, abounding the public walkway through the campus, ensures high accessibility to the building and a lively edge to the walkway, providing additional policing.

In the context of dealing with highly sensitive and secure information, the flow of information between

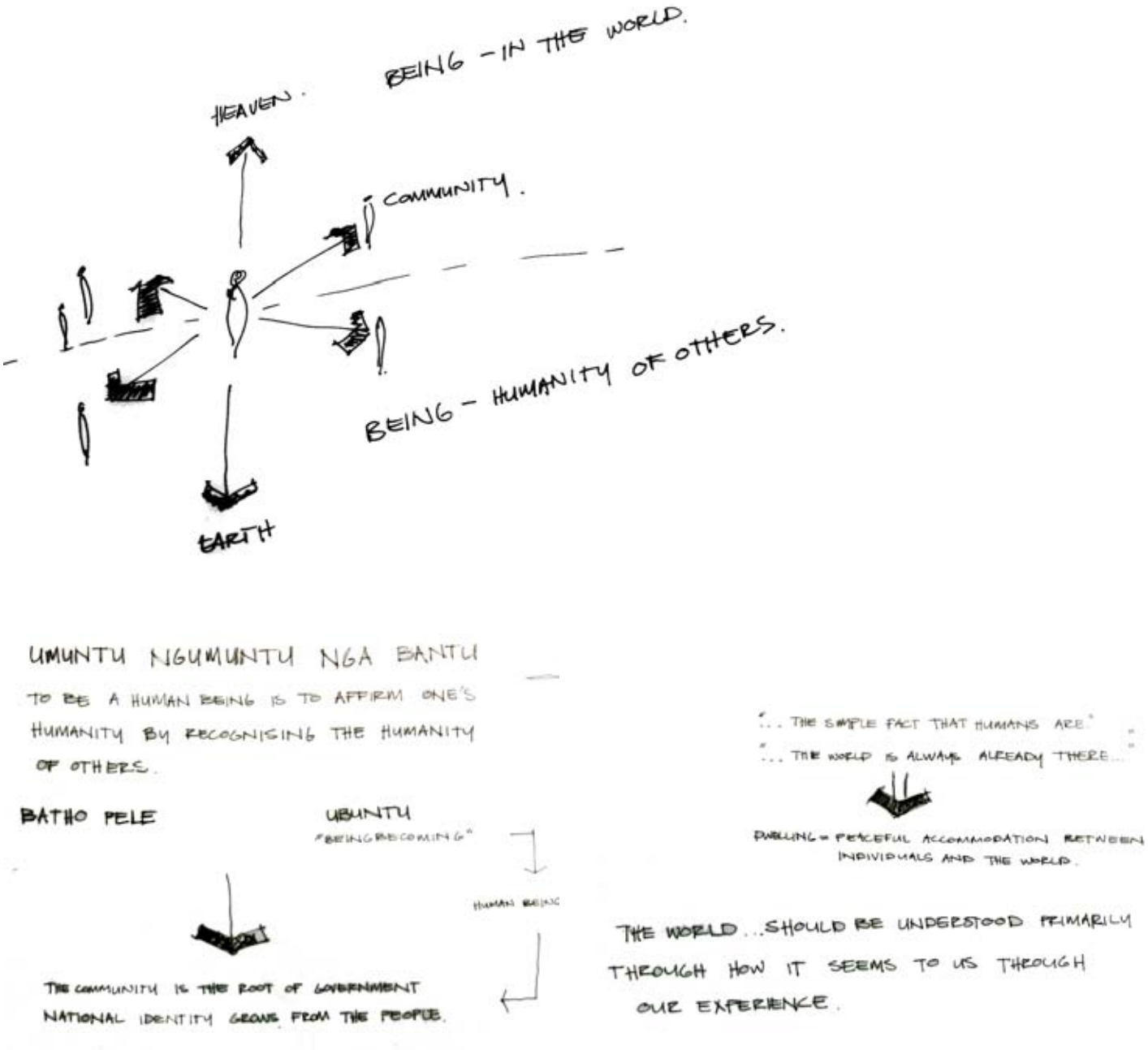


Figure 65: Understanding identity

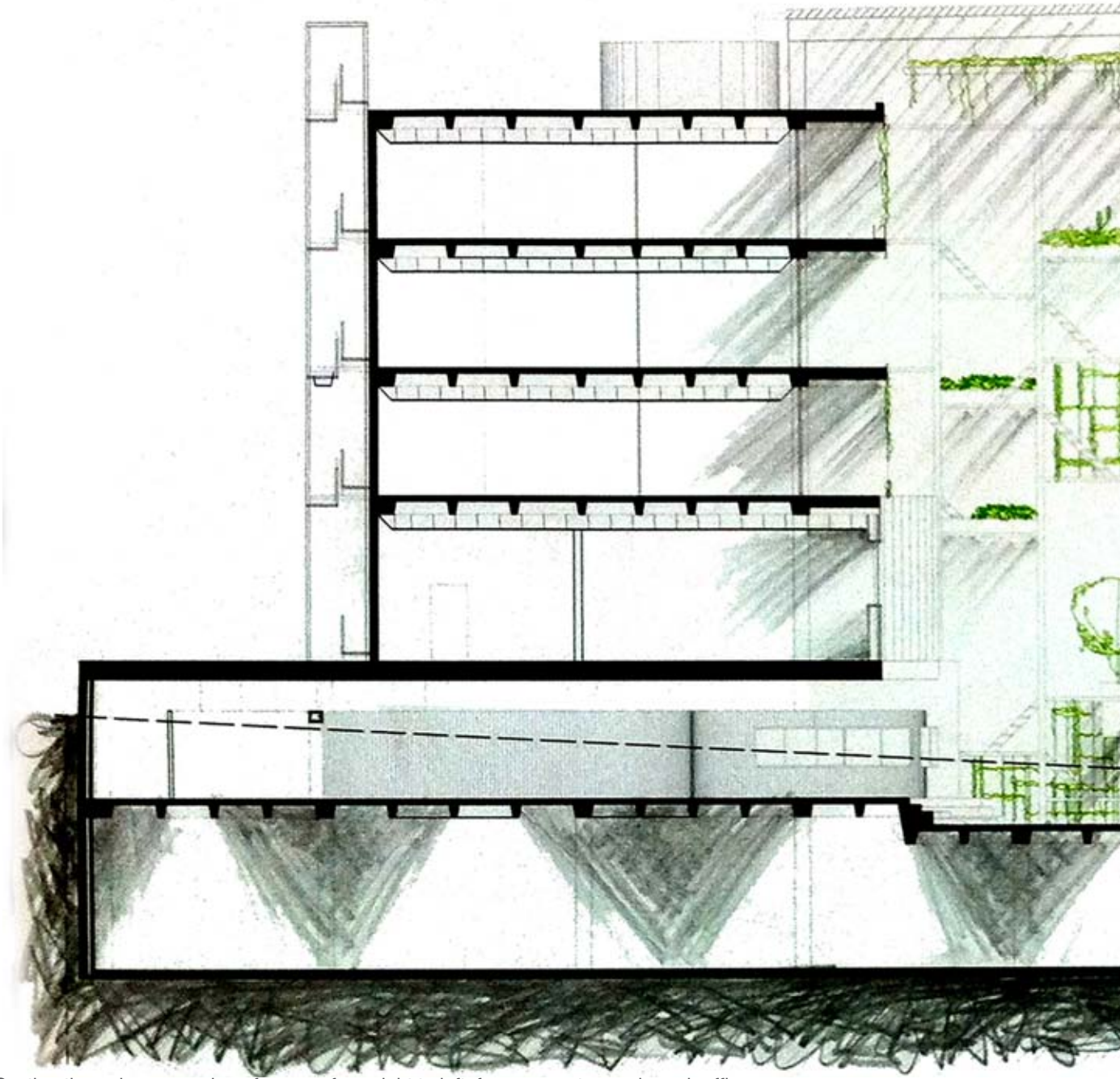
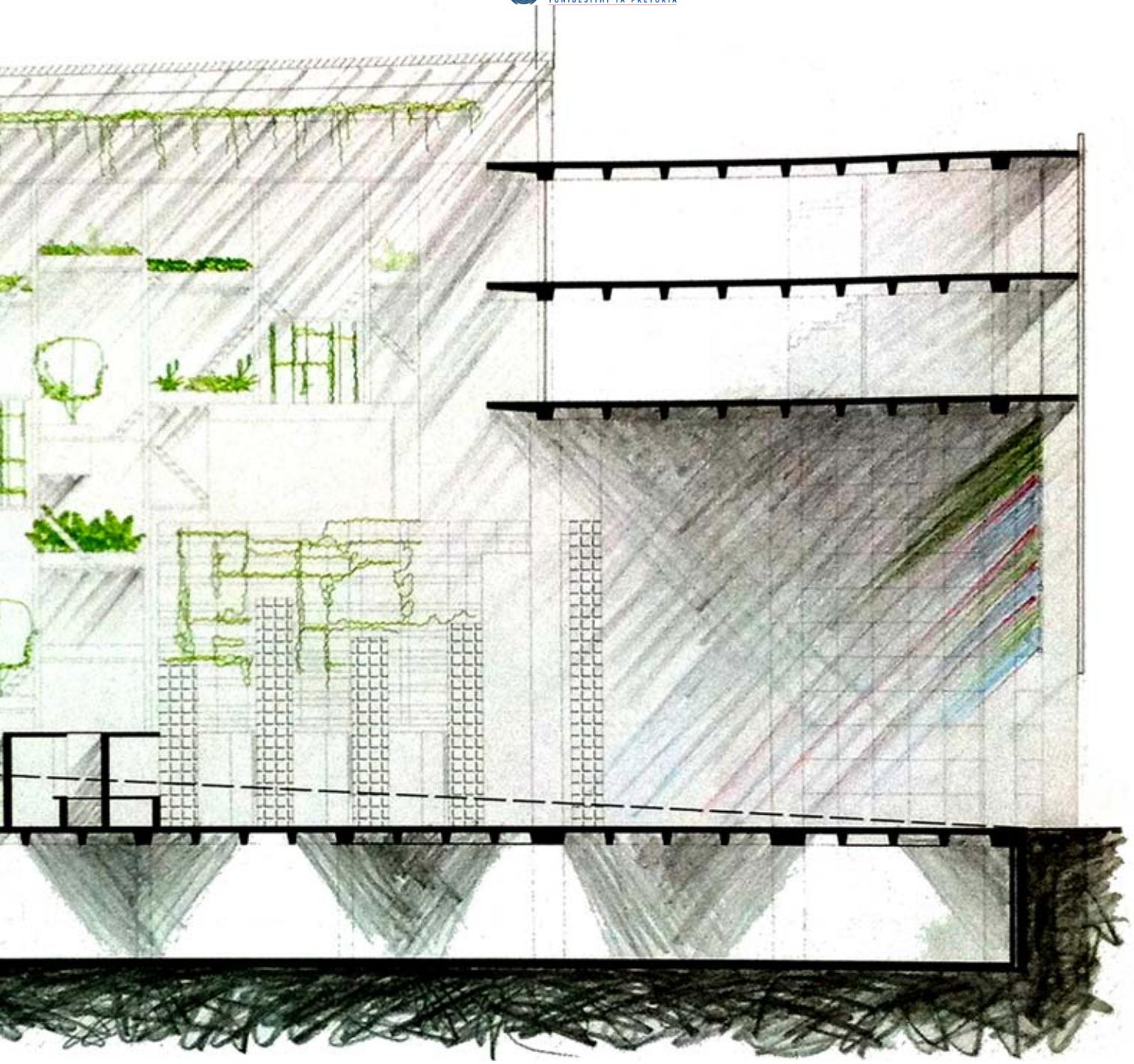


Figure 66: Section through progression of spaces from right to left: foyer - sanctuary - branch office



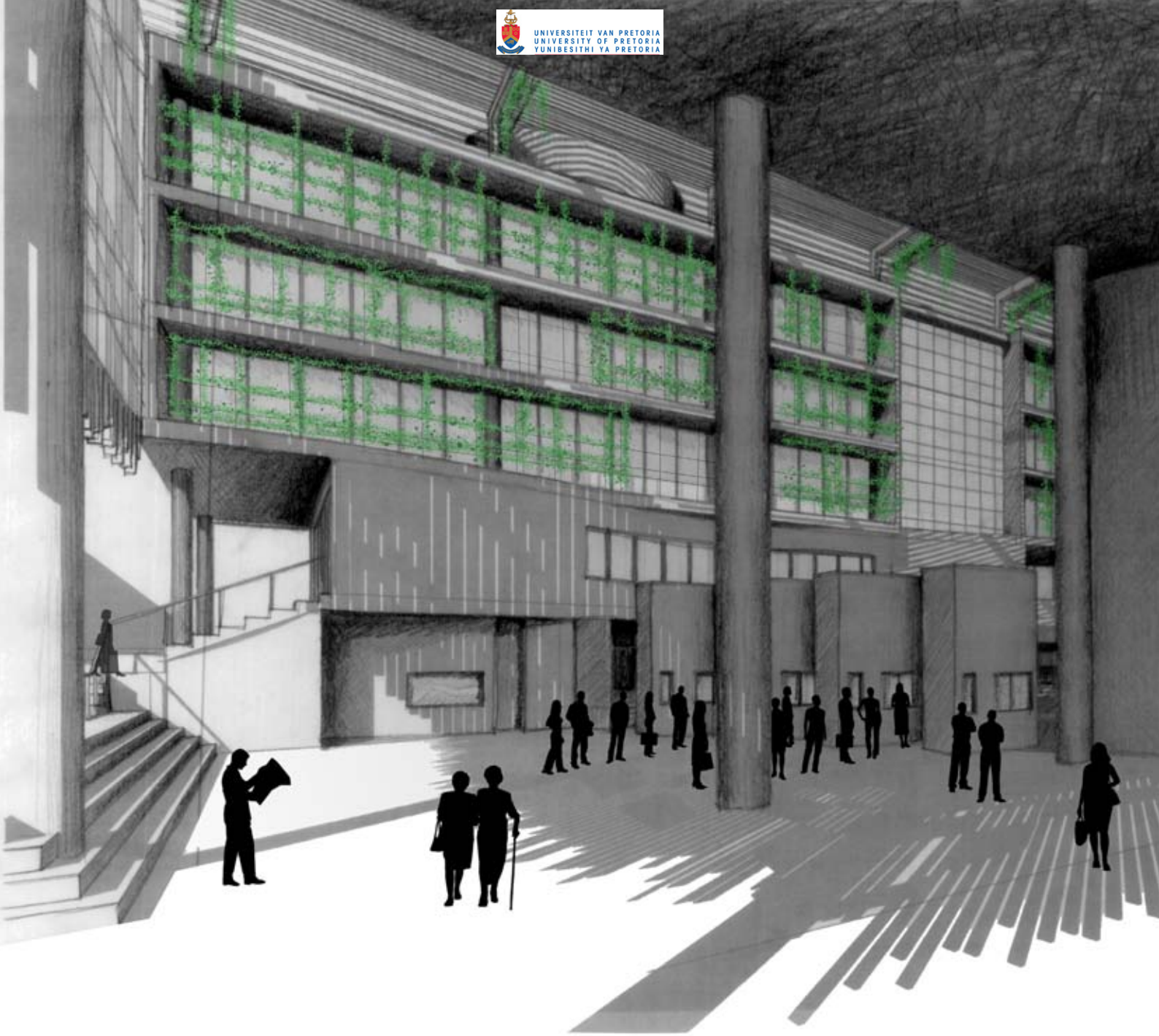
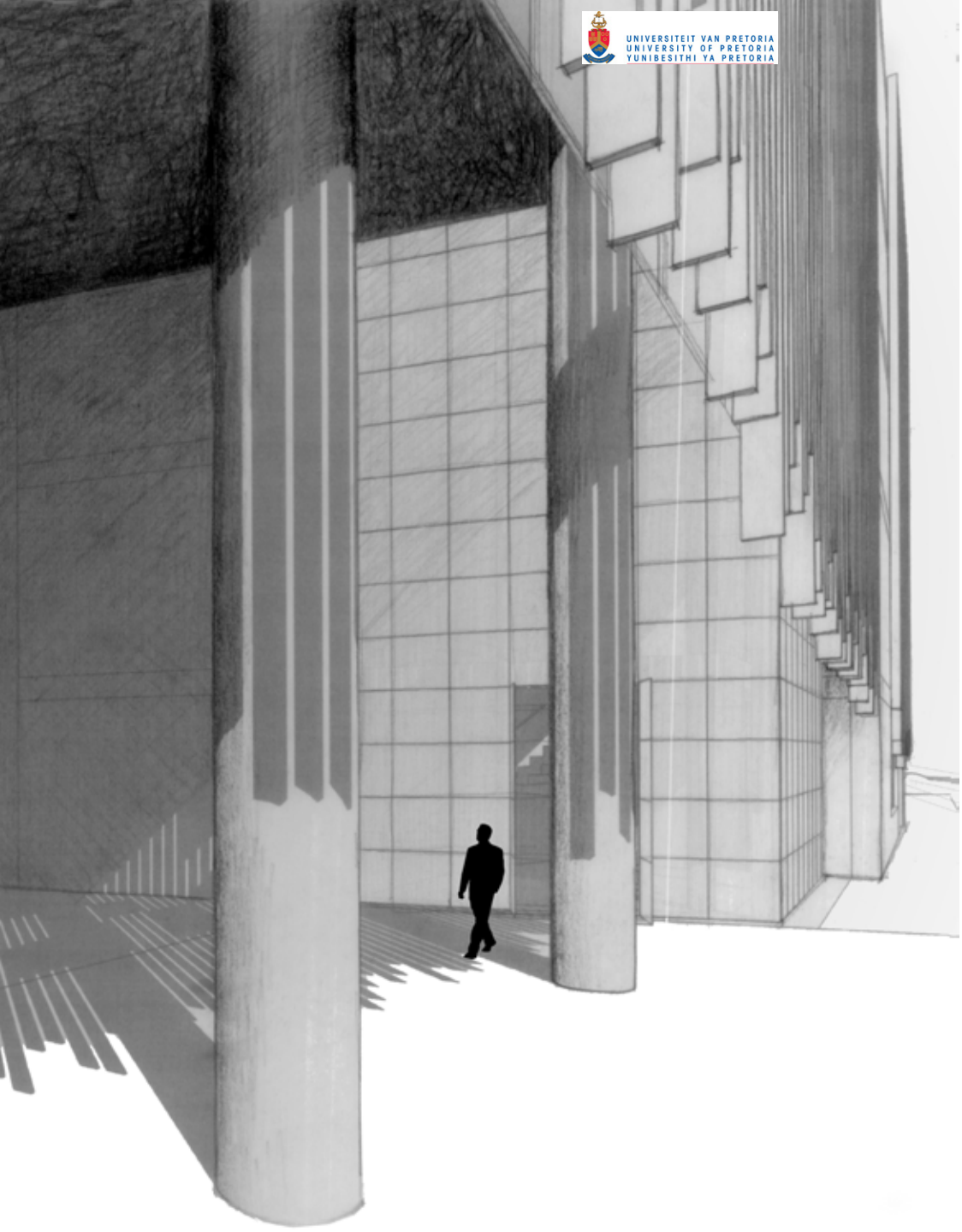


Figure 67: Foyer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UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Figure 68: Sanctuary


UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

departments is a crucial consideration. In the era of technology it is foreseen that this will become less of a spatially restrictive factor. At present, however, the department still makes use of a certain amount of physical documentation, including the issue of identity and travel documents. The flow of information pertaining to these processes occurs mainly between the branch office, located in the central 'void' space of the building, and the Department of Civic Services which is located in the New Corporation building to the south of the headquarters. In order to ensure secure movement of documentation, a physical connection is created between the two buildings, with high security measures.

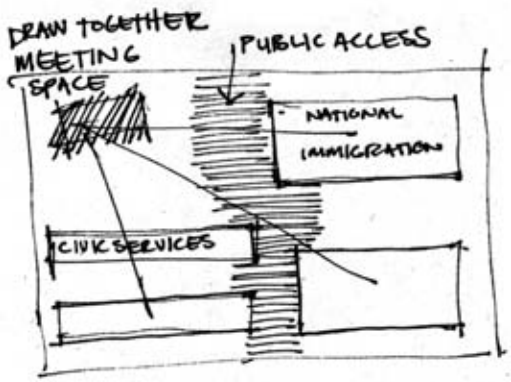
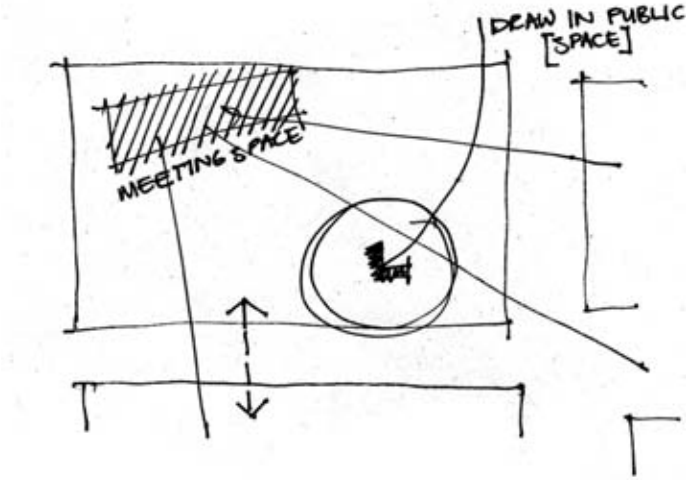


Figure 70: Drawing together the department



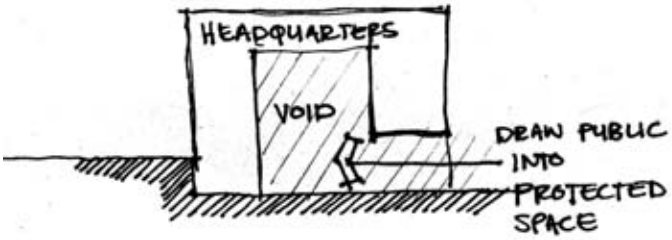


Figure 69: Building protecting void space

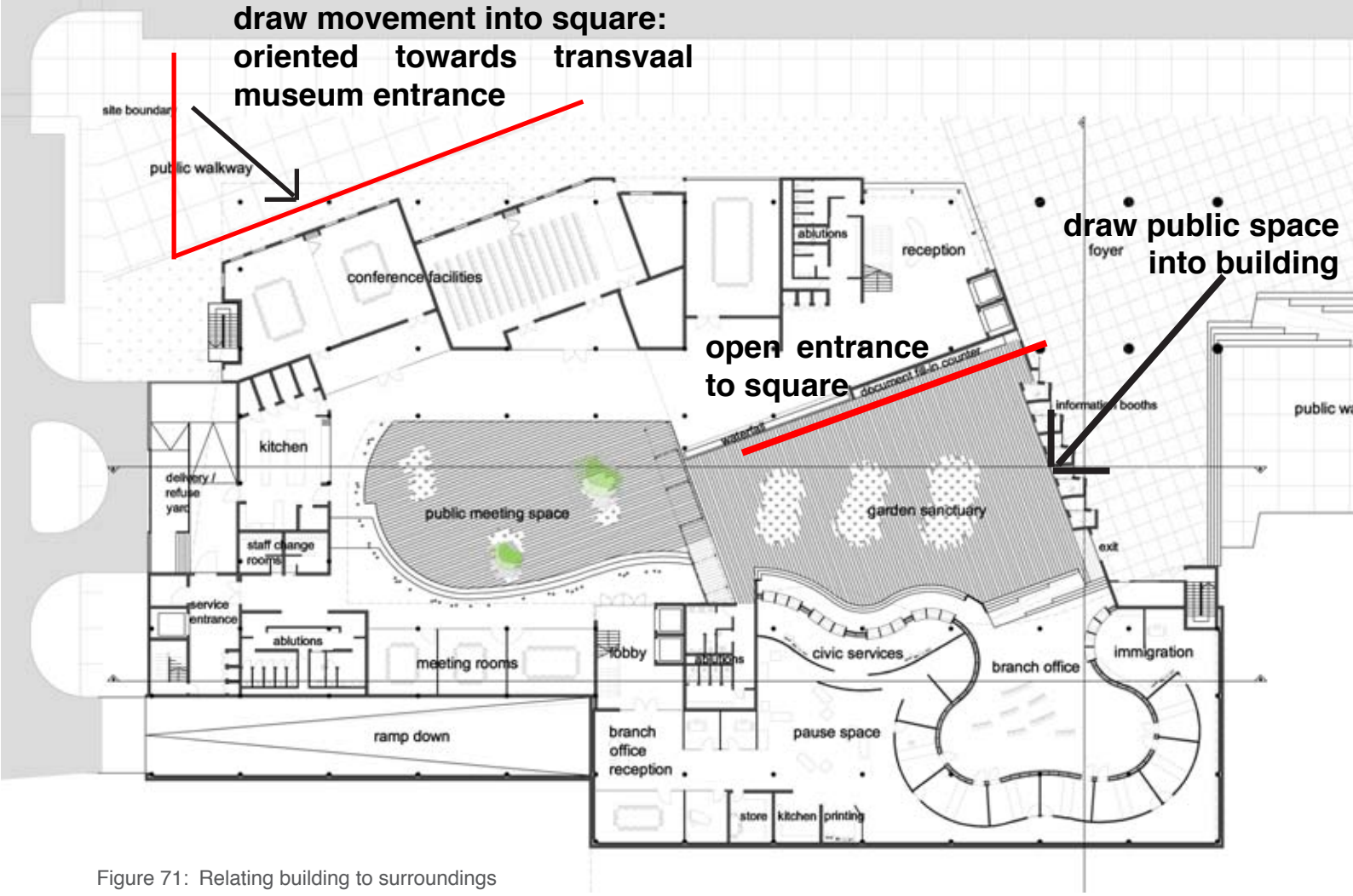


Figure 71: Relating building to surroundings

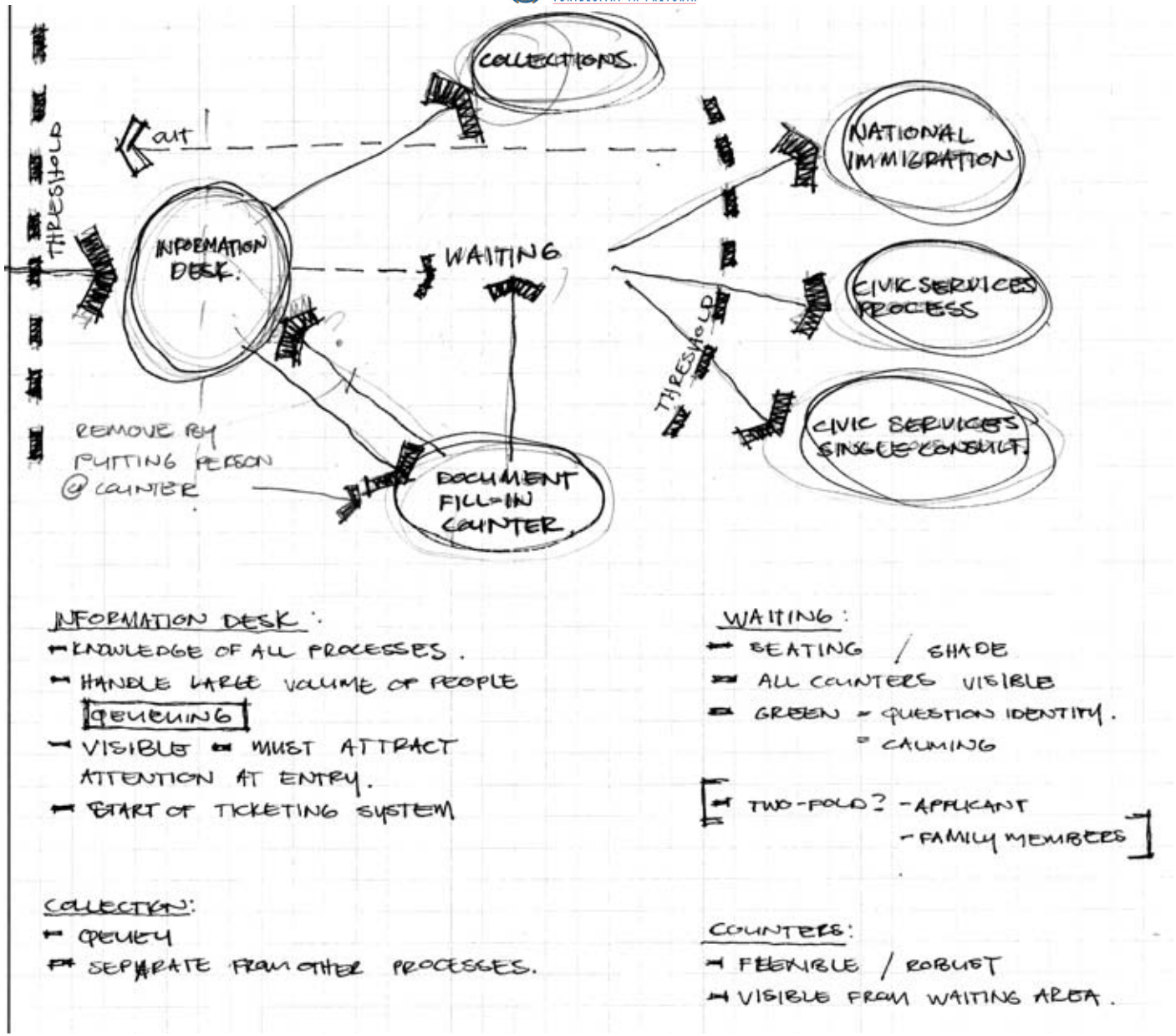


Figure 72: Department organisation / relation

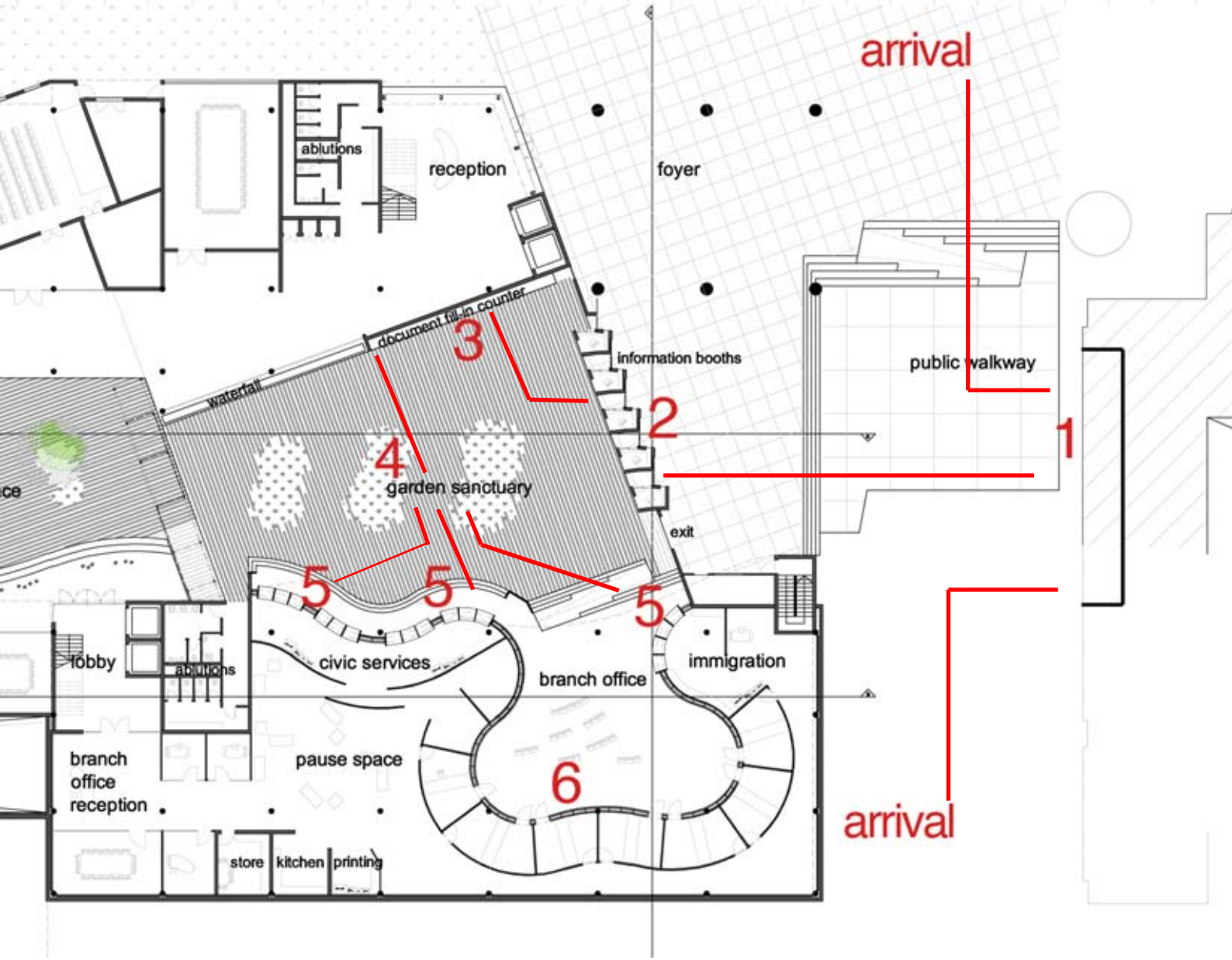


Figure 73: Public interface functions diagram

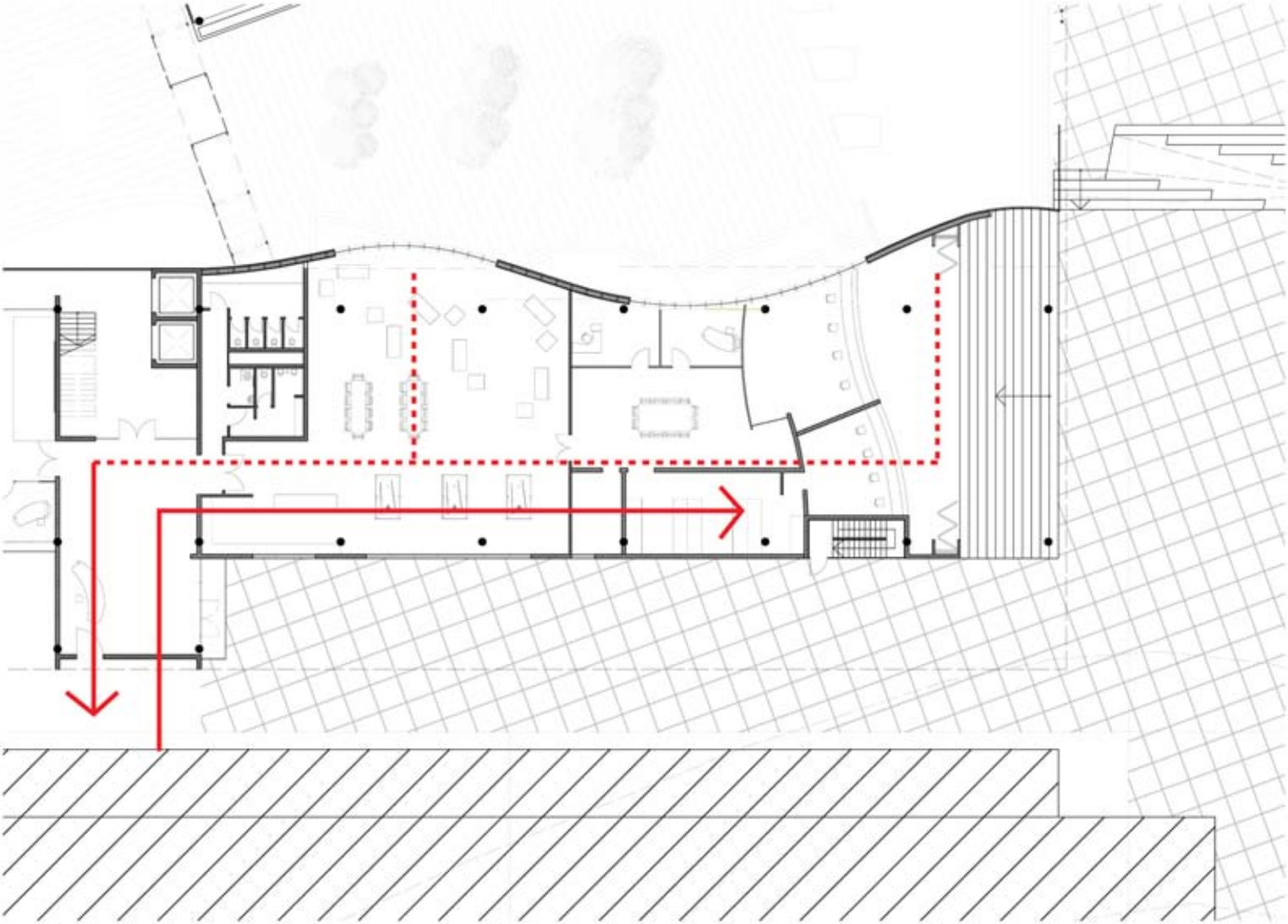


Figure 74: Flow of information

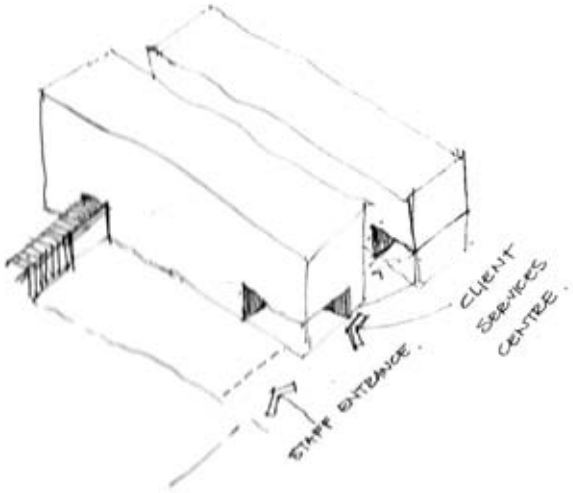


Figure 76: Relation to public walkway through campus

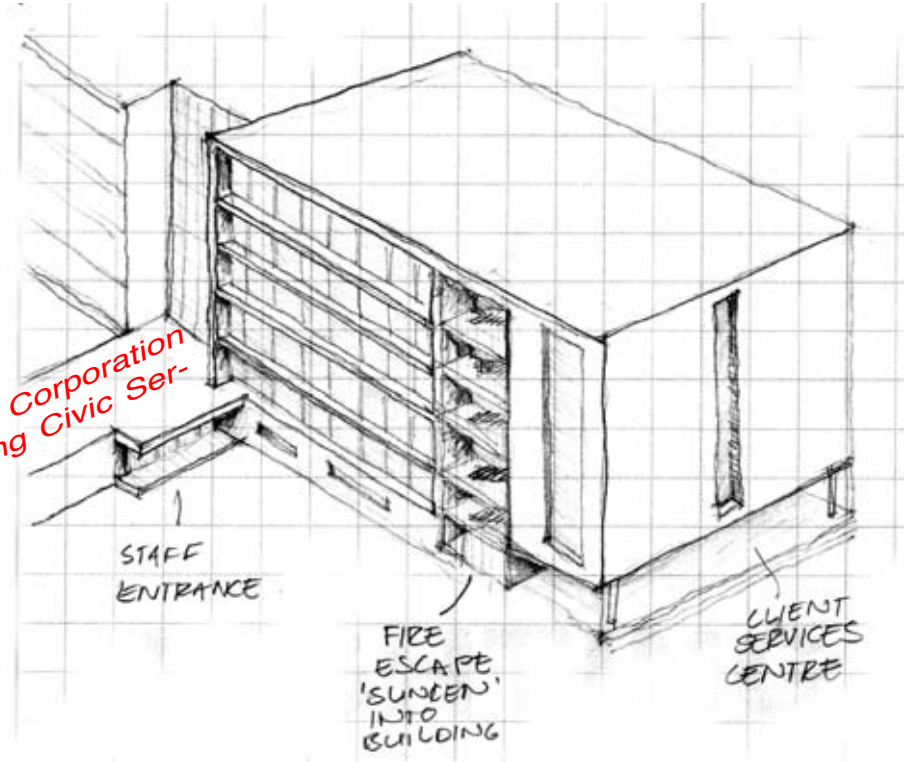
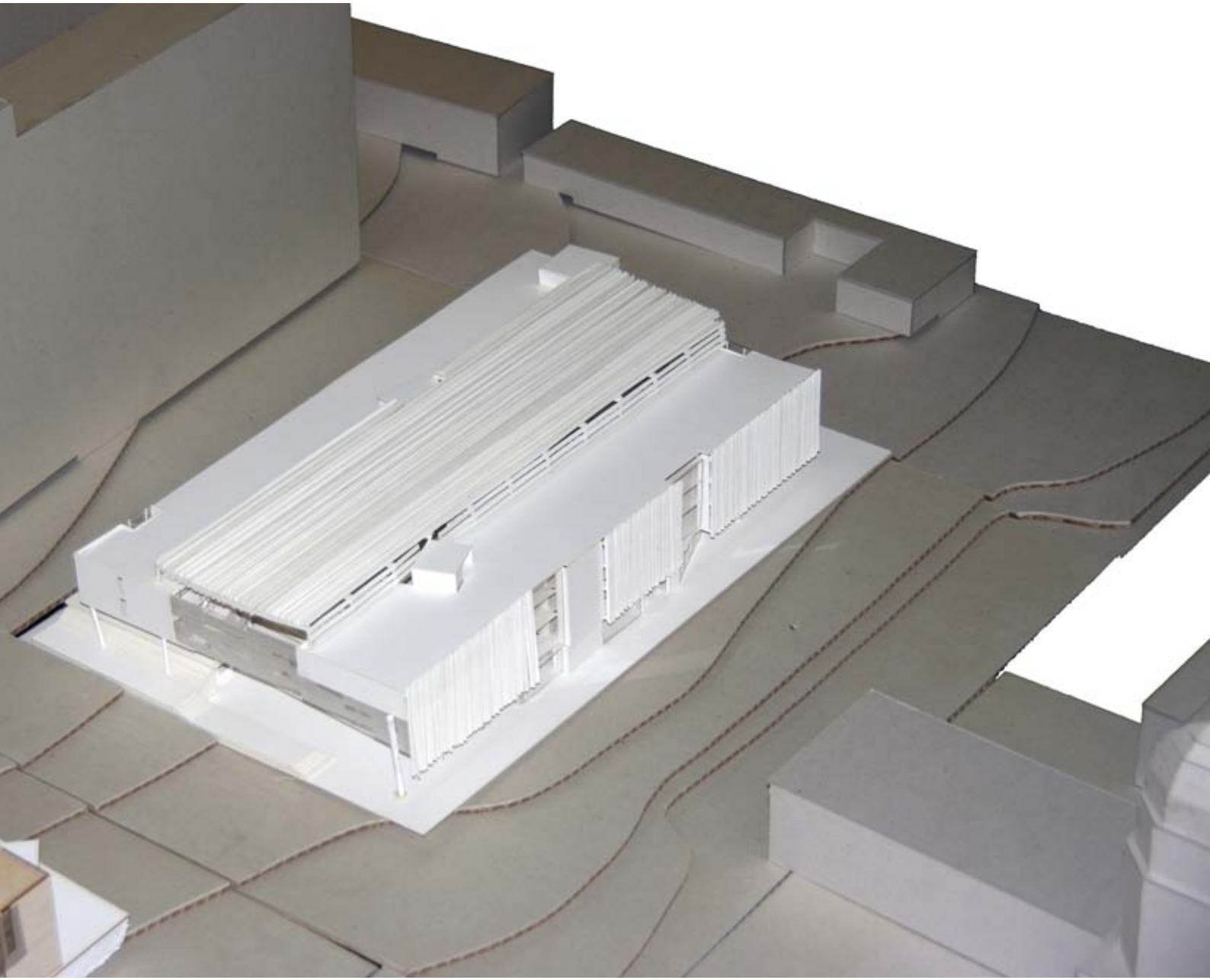


Figure 75: Connection to New Corporation Building



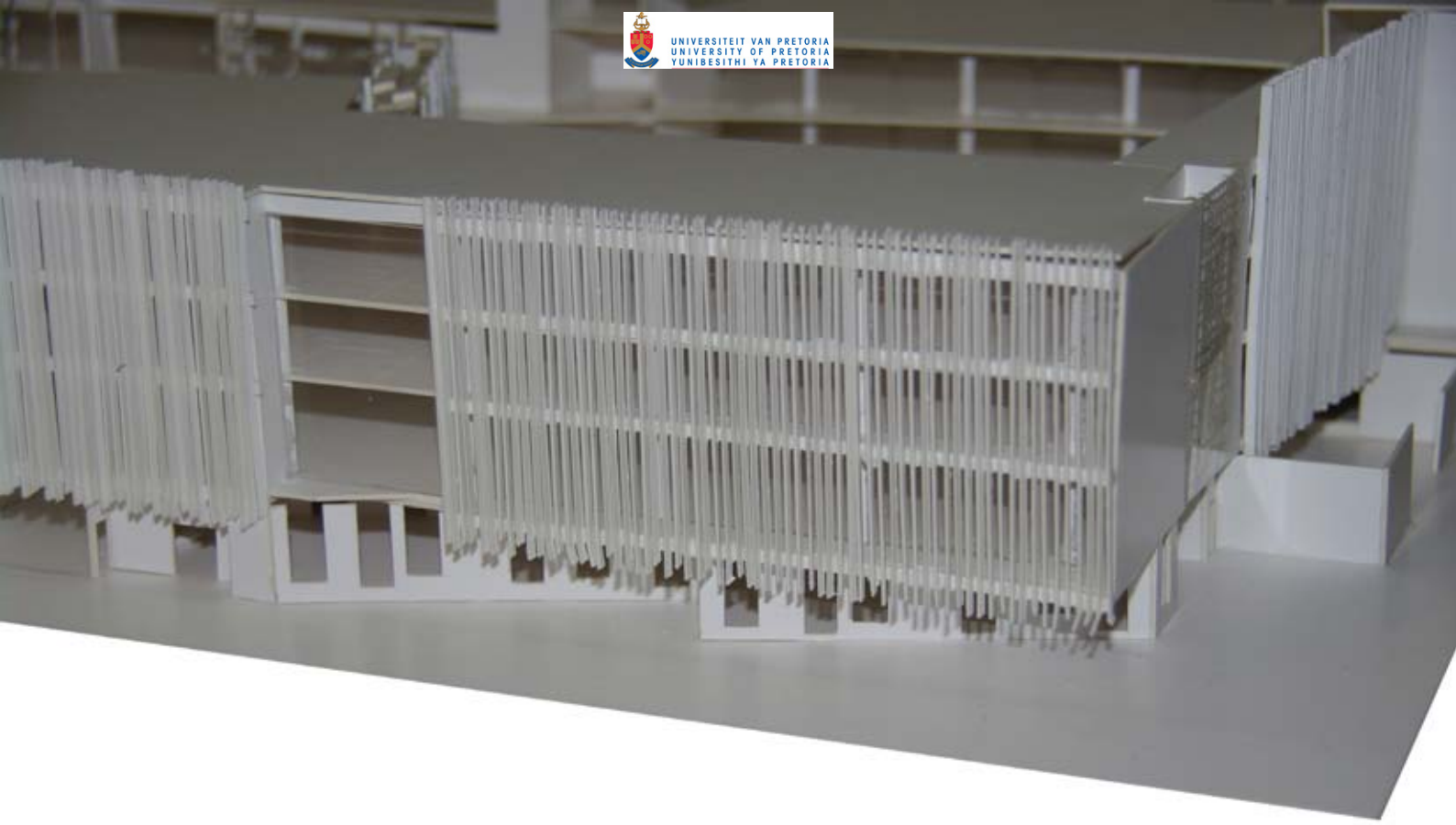


Figure 77: (left) birds eye view of model
Figure 78: view from northwest

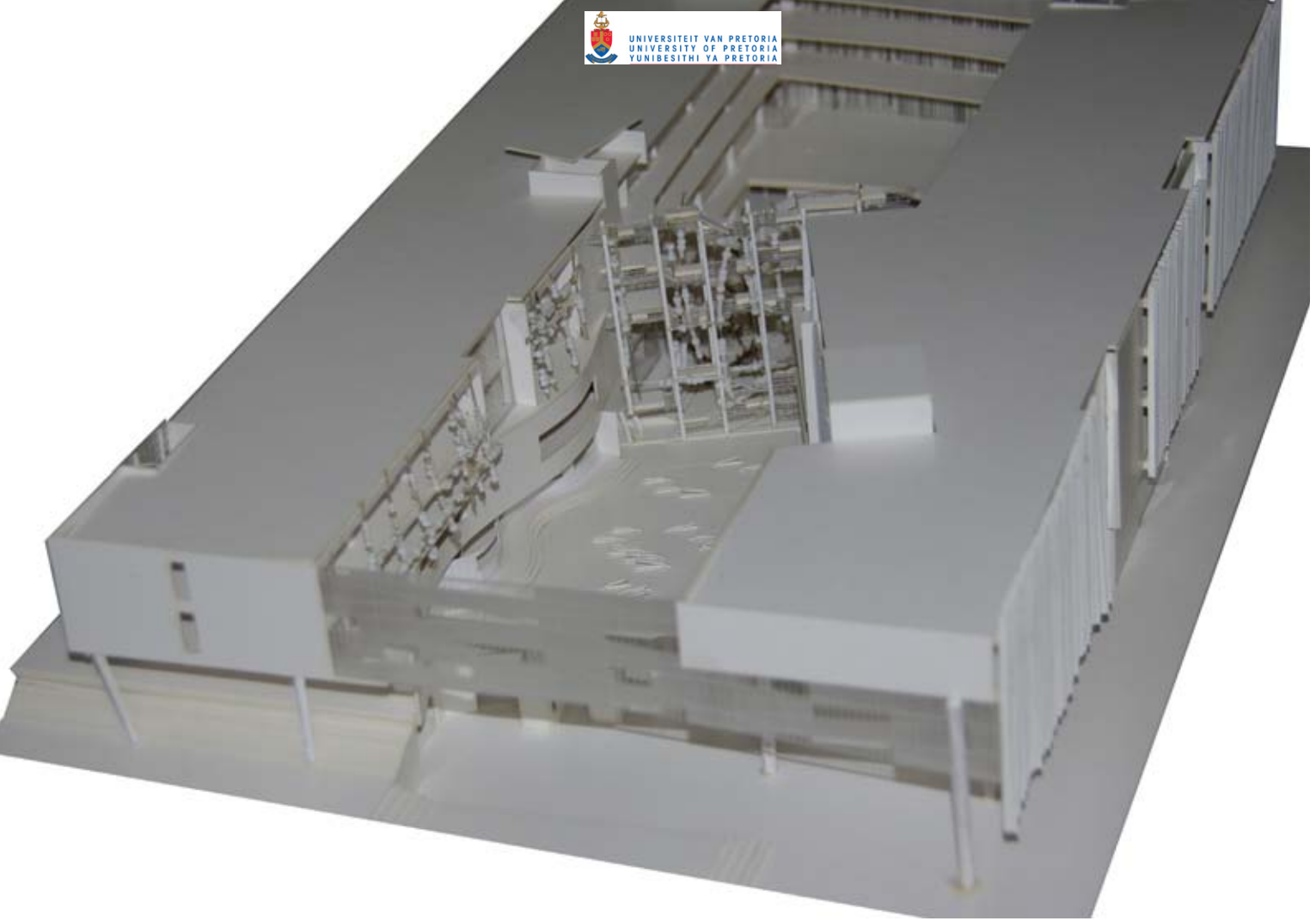
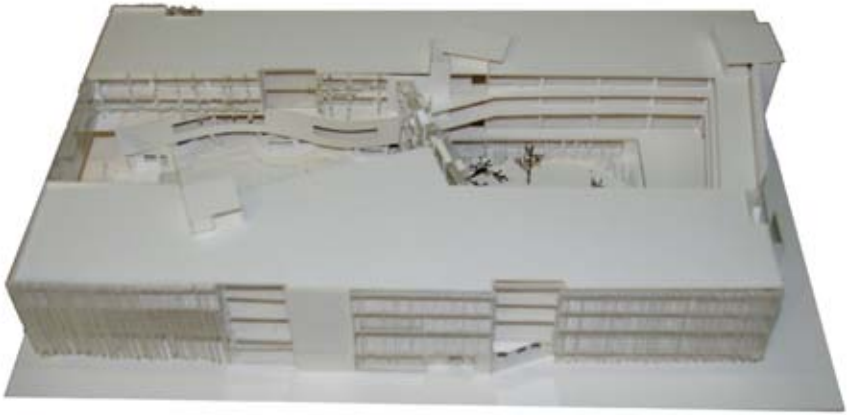
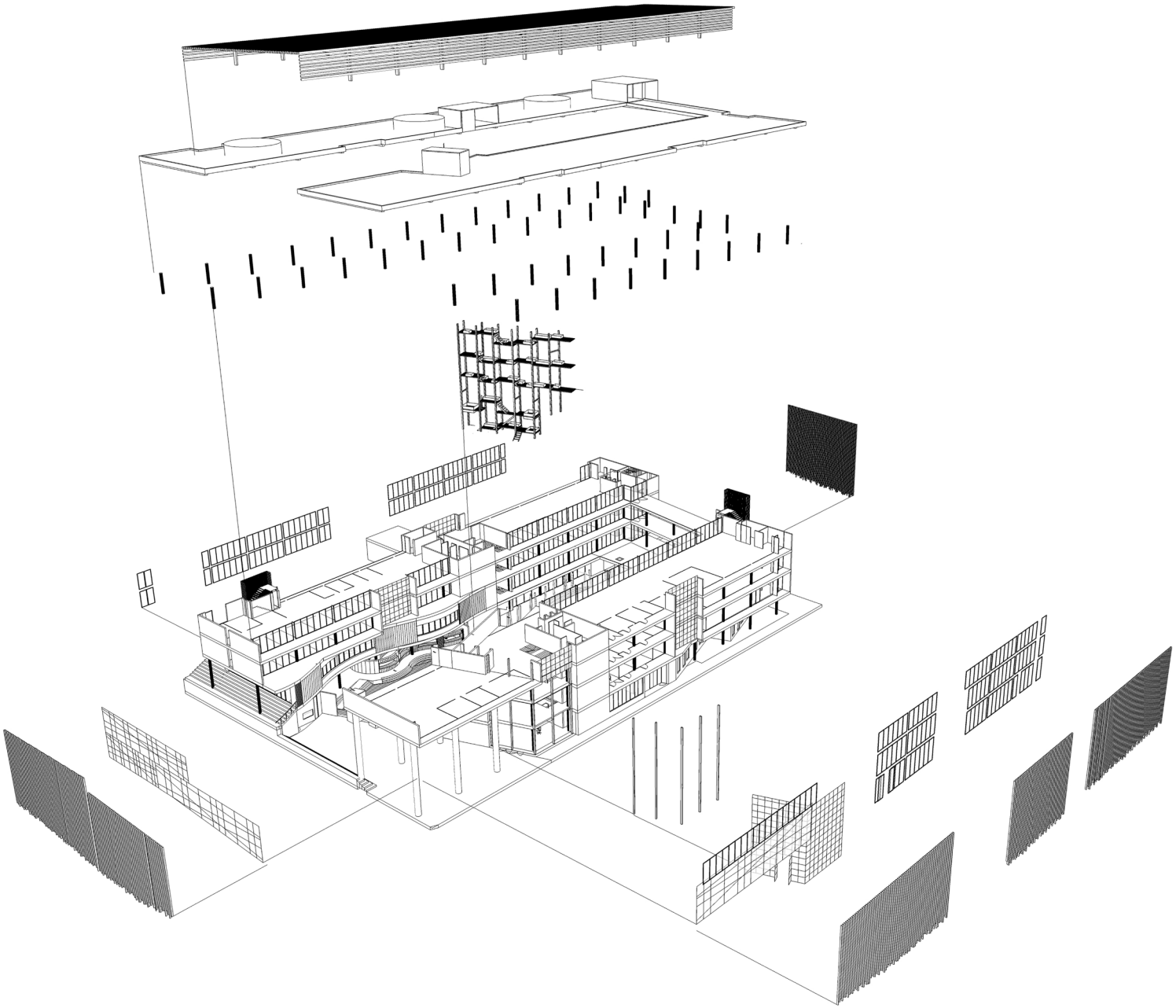


Figure 79: (above) view of sanctuary and green stair system
Figure 80: (top right) view of ground floor with green stair system separating sanctuary and public meeting space
Figure 81: (right) northern view of facade and central void



Chapter 8. Technical Development



1. Void

The central void consists of two main spaces. In order to increase the experience of these spaces, the foyer space has subdued lighting, achieved through a combination of a louvre and coloured glass system.

i. Vertical garden

The garden setting is strengthened by the creation of vertical green walls. Two systems are implemented.

The first system forms a light screen on the northern and southern faces of the void, in order to allow light into the surrounding office spaces. A cable and channel system forms the frame for vines and creepers, with distances and spans controlling the creation of open sections to allow an integration between the void and the surrounding office spaces.

The second system is a steel stair system, which forms a connection between the two wings of the building, whilst acting as a divide between the two main spaces of the void. The lower levels of the stair are separated from the upper circulation spaces and are accessible from the sanctuary floor in order to serve as viewing platform / gallery to the meeting space. Green elements are integrated into this system to complete the garden setting of the sanctuary.

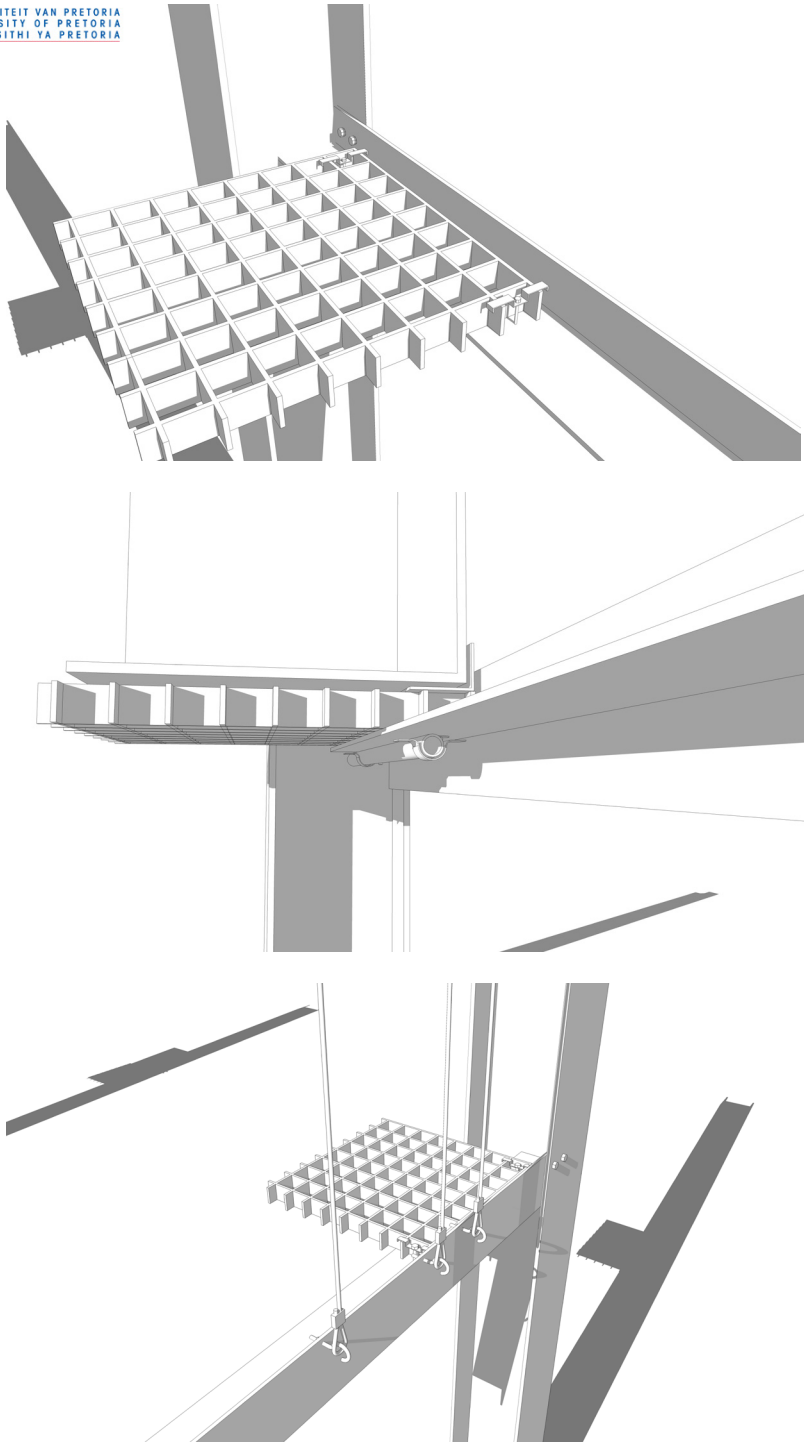


Figure 82: ‘Green stair’ details

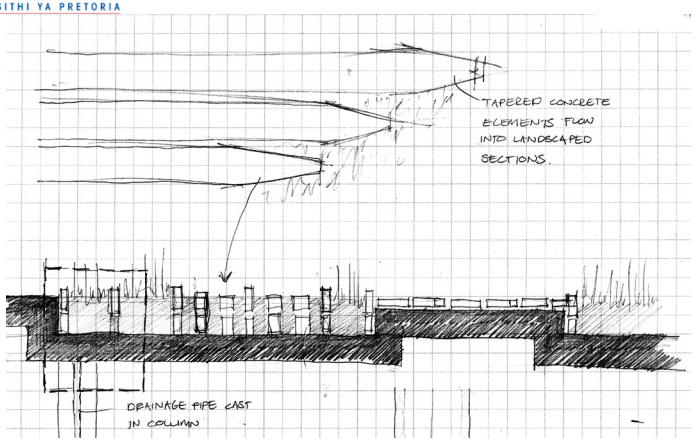
Figure 83: green stair system

ii. Flooring

In order to create the garden setting, a multi-operational modular surface, a system designed as an outdoor flooring system, was chosen. The paving modules seem to flow into the planted beds in order to integrate the two surfaces into one complementary system.

The paving modules have open joints for drainage, with sub-surface drainage mats, and drainage pipes cast into the concrete structure.

The beds will be planted with indigenous long-grasses to create a veld setting.



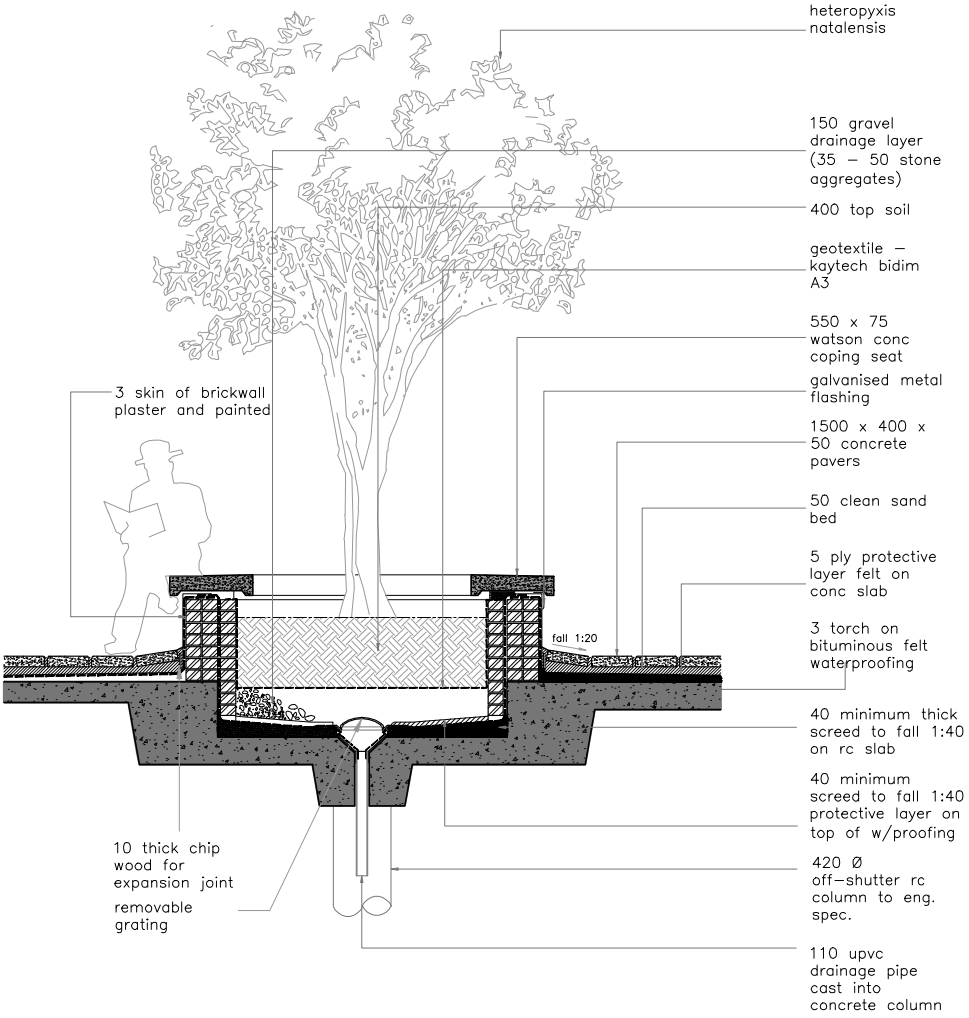


Figure 84: (above) entral void flooring system
Figure 85: (right) planter detail

iii. Roof system

The void space is covered by a mechanical aluminium louvre system, which will close into a watertight system in order to protect the void from all the elements.

The storm water run-off from this roof system is collected in a water storage tank, located on the concrete roof of the southern wing of the building. This water tank will feed the gravity irrigation system of the sanctuary.

Overflow of the storm water will be led to the city storm water system.

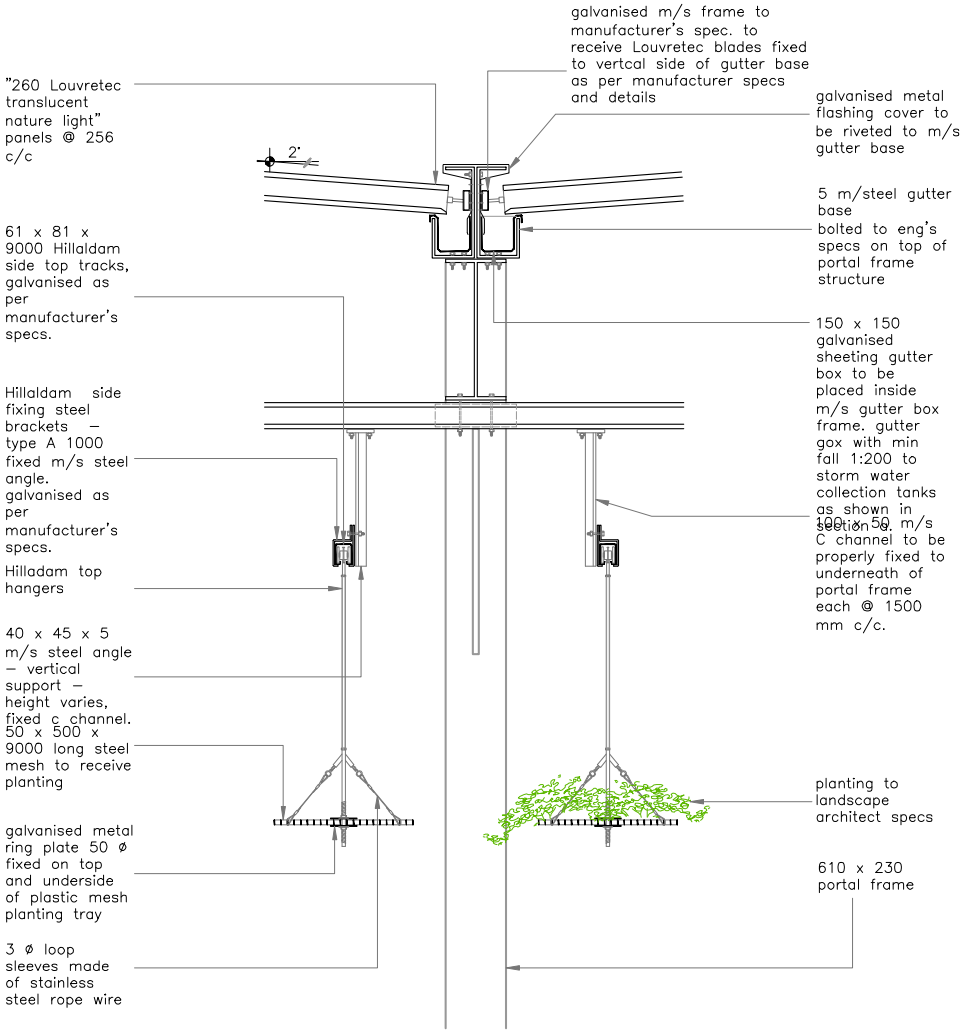


Figure 86: 'Green' roof detail

2. Structure

The building is based on a domino structure of concrete slabs and columns. This system is chosen for thermal massing.

Brick is included both as a massing element and as reference to the context. Two of the buildings on the campus are face-brick buildings, and Pretoria has a history for the manufacturing of bricks, which are used as construction material throughout the city.

The concrete structure allows for the use of free-form elements for vertical definition of space. The public interface is defined by a timber 'ribbon' element that extends into the void space and retracts into the building space in order to strengthen the relation between the 'inside' and 'outside'. The materiality further contributes to the natural setting of the sanctuary.

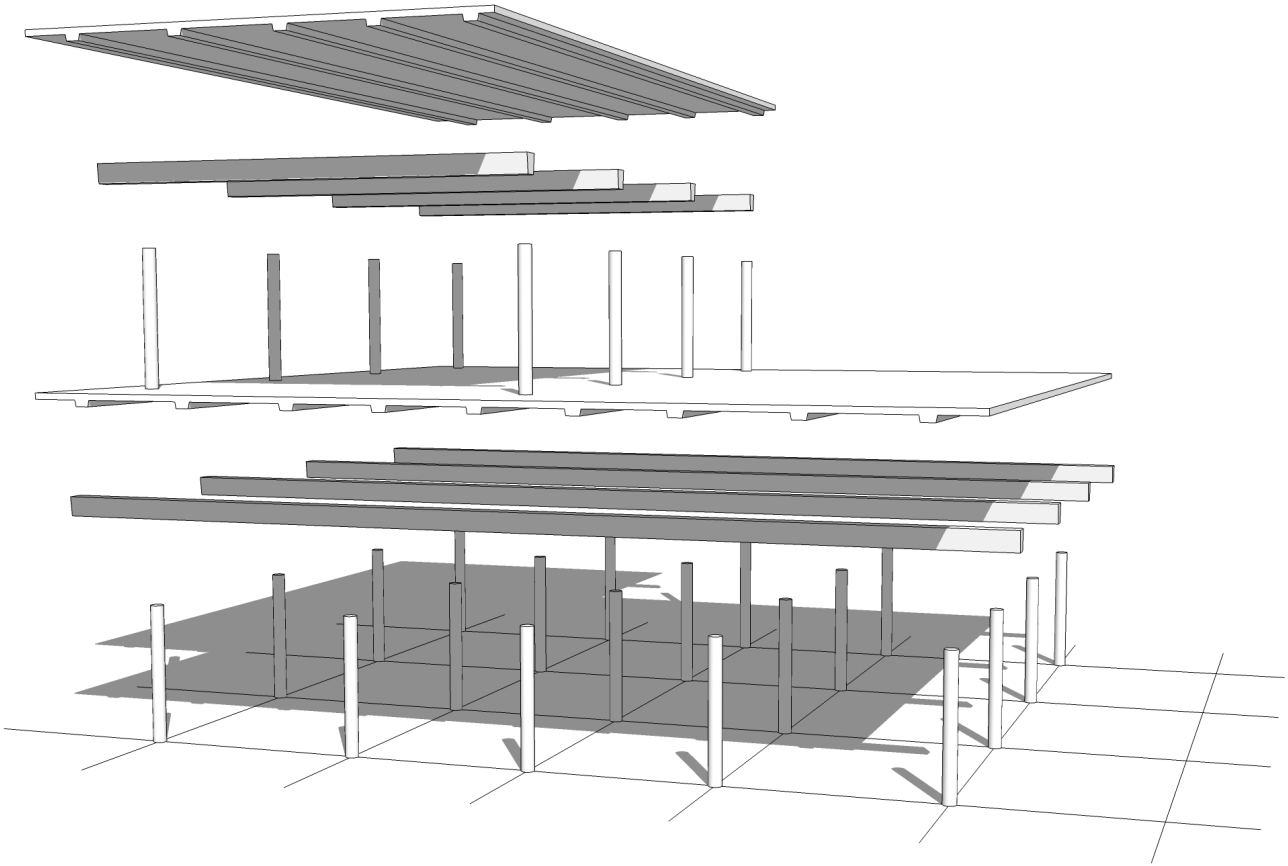
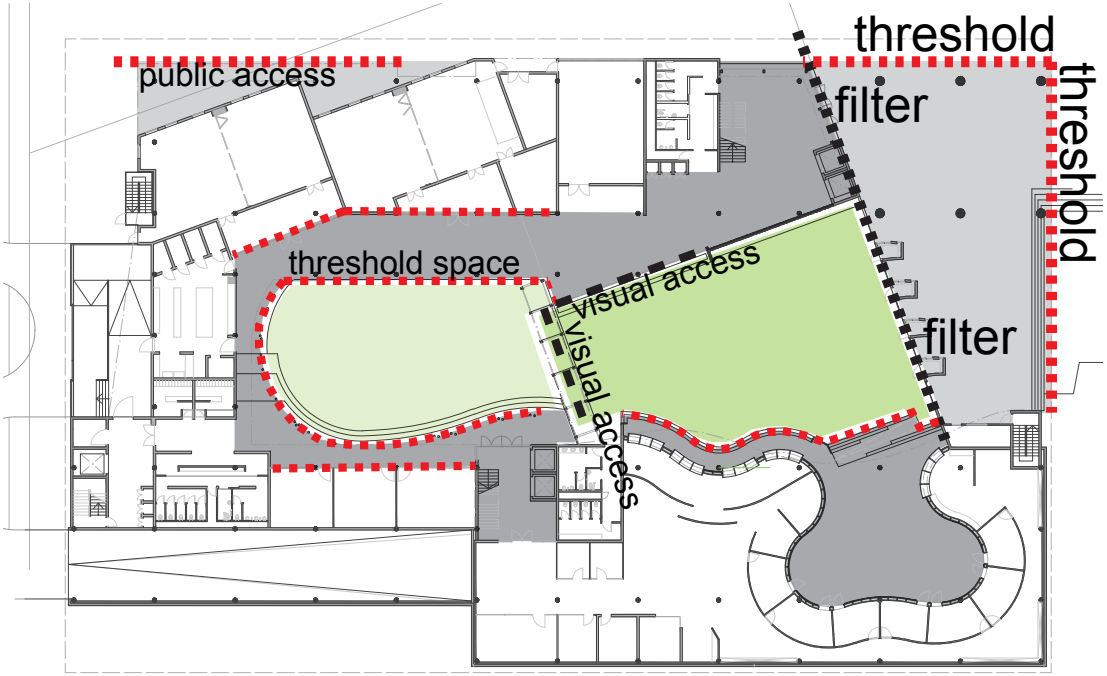
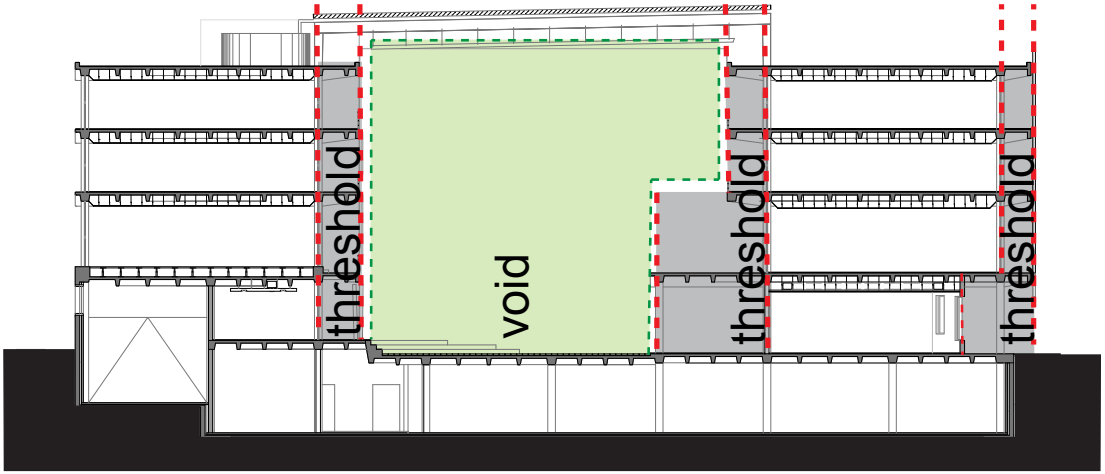


Figure 87: Section f1 - free form at lower levels

3. Building envelope





4. Passive systems

i. Shading

The slabs are extended on portions of the northern facade of the building for shading and will be used as balcony spaces, creating concrete box structures. Additional shading is provided in the form of vertical louvres that will also serve as glare control. These vertical screens form a continuation of vertical facade elements on the NZASM building.

ii. Natural ventilation

The depth of both wings of the building is less than 15m in order to allow for natural ventilation. This ventilation is encouraged through the installation of full length vertical pivot operable windows and the installation of chiller beams, cast into the slabs.

By these measures mechanical ventilation is restricted to the conference and meeting facilities as well as the deep-structure area of the branch office.

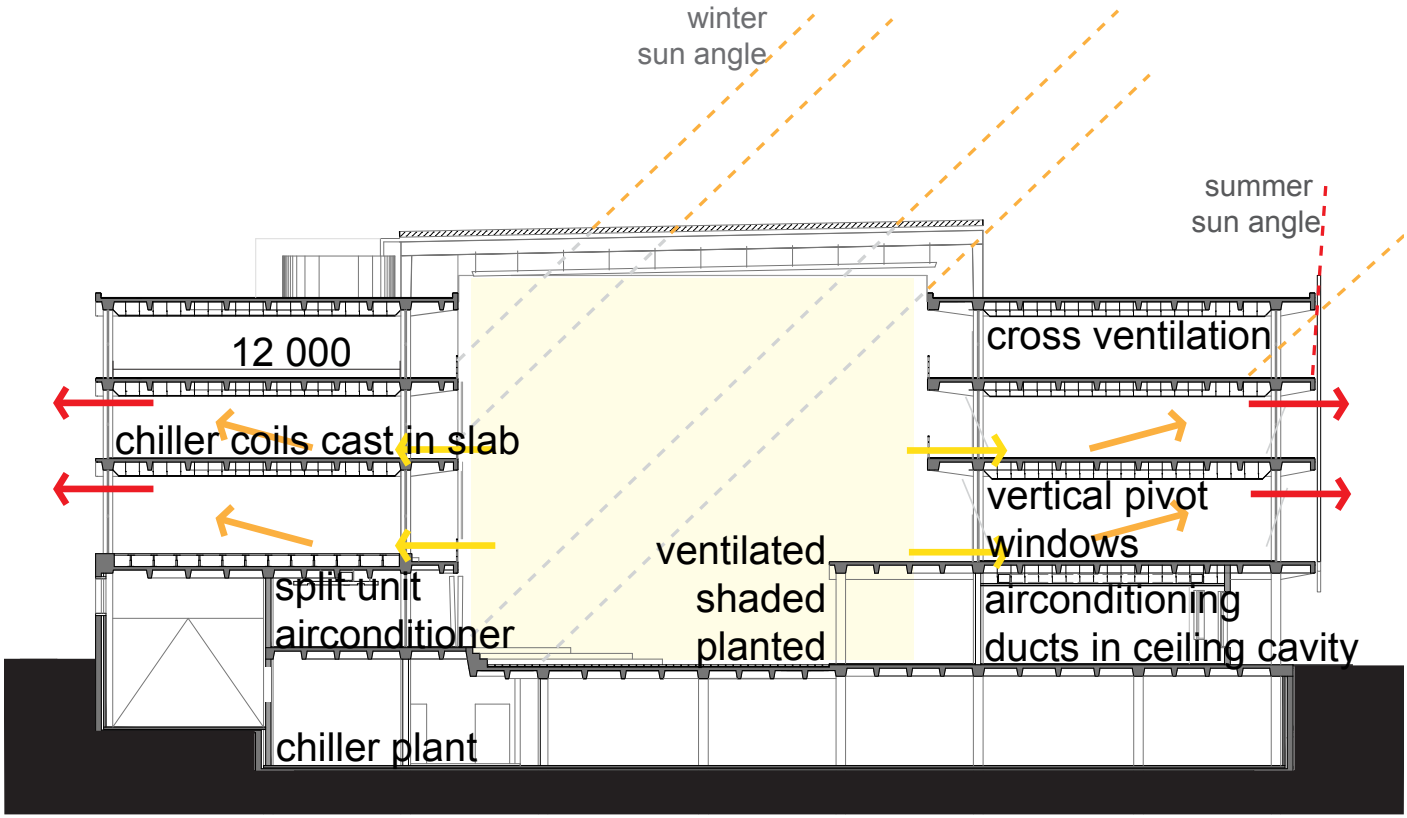
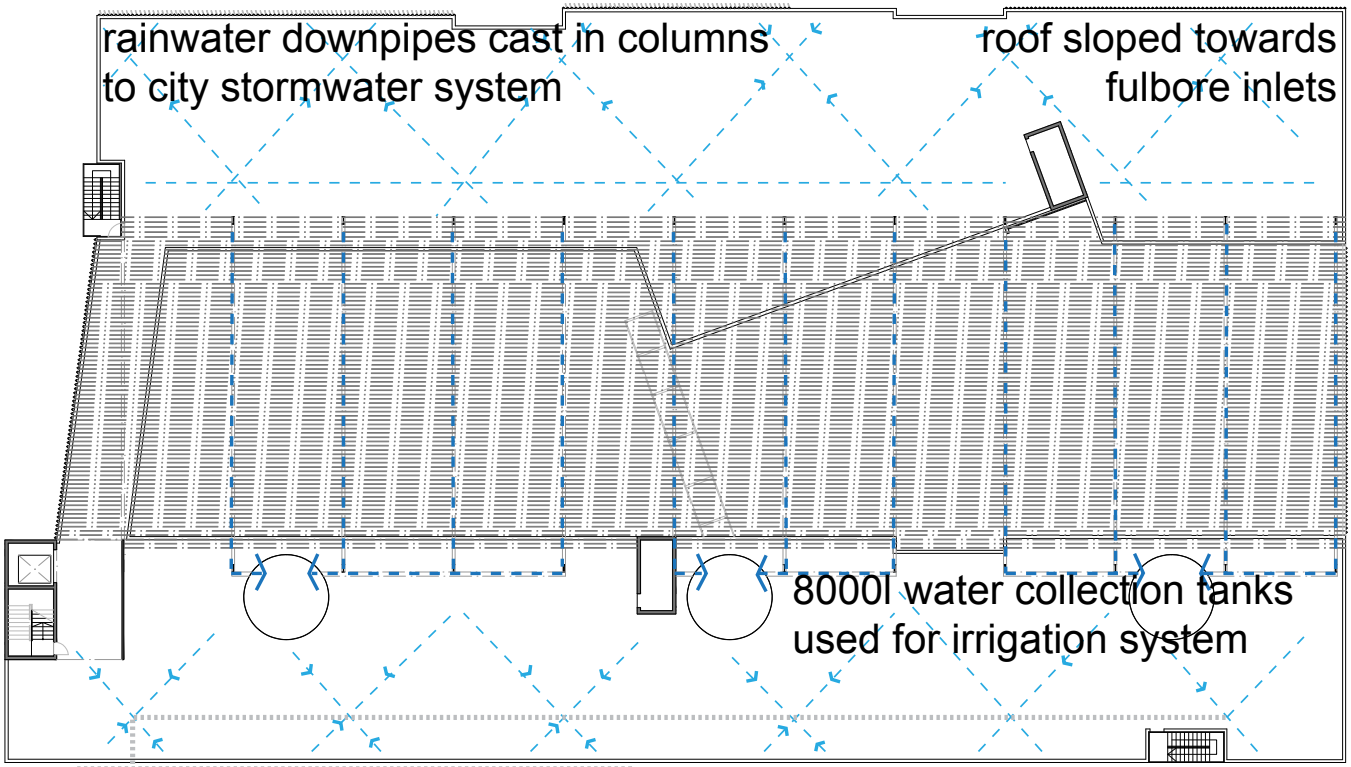


Figure 88: Section f4 - slab overhangs, vertical louvres and full length pivot windows to aid passive climate control

iii. Storm water



iv. SBAT

Results for the assessment of the building show low percentages for water, capital costs and materials and components.

The results for water is low due to the fact that the building includes a basement and encloses a central open space. Both of these elements leads to a system where ground water infiltration is not possible on site. With regard to the larger campus, use of permeable surface materials are employed and as such the results for the campus would read more favourably.

The materials and components result is influenced by the lack of use of recycled building materials. The current use of the site is ground level parking, thus leaving no structures to be demolished, apart from a small brick building in the corner of the site. Agreements could potentially be made with other construction sites for the re-use of materials.

The unfavourable result with regard to capital cost is due to lack of reuse of existing buildings. As stated above the site is currently vacant, apart from a small brick building which is unsuitable to the proposed use. The campus consolidation does make use of the existing buildings on the city blocks, thus ensuring more favourable results for the larger development.

5. Materiality

The materiality of the building relates mainly to context and climate. Brick, which is viewed as a local resource due to the history of brick manufacturing in the area, as well as a contextual material relating to the existing built fabric of the city. Additionally it has a high capacity for thermal storage which suits the climate.

Concrete is used both for its thermal storage and structural capacity.

Extensive use of glass is made in the design. This material allows in natural light, which provides a healthier environment for employees, but at the same time allows heat transfer. For this reason the design aims to ensure that all curtain walling sections are protected from direct, full sun exposure.

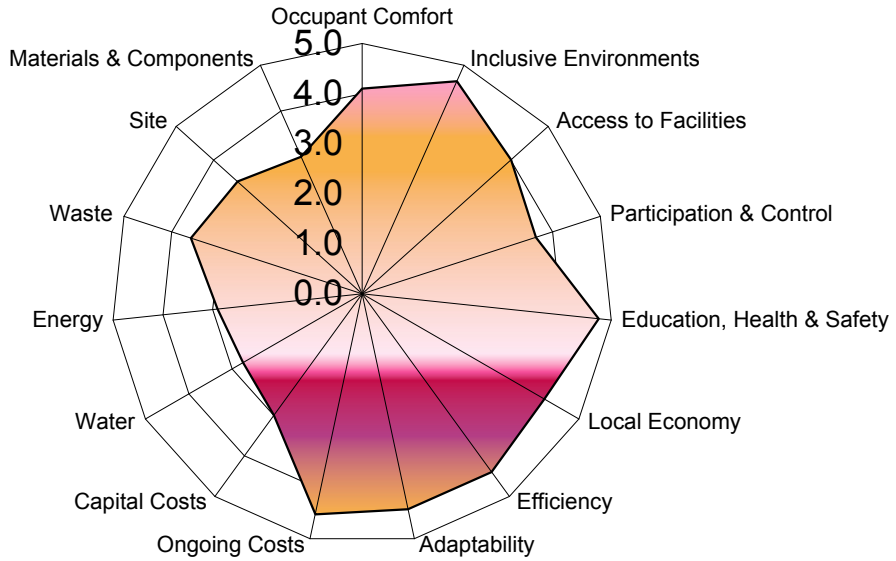
Glass is further linked to the concept of democracy, embodying the concept of transparent government and accessibility.

Timber and planting is used throughout the interior collective spaces, creating a more natural setting in which people can related to a broader context as discussed in the literature study.

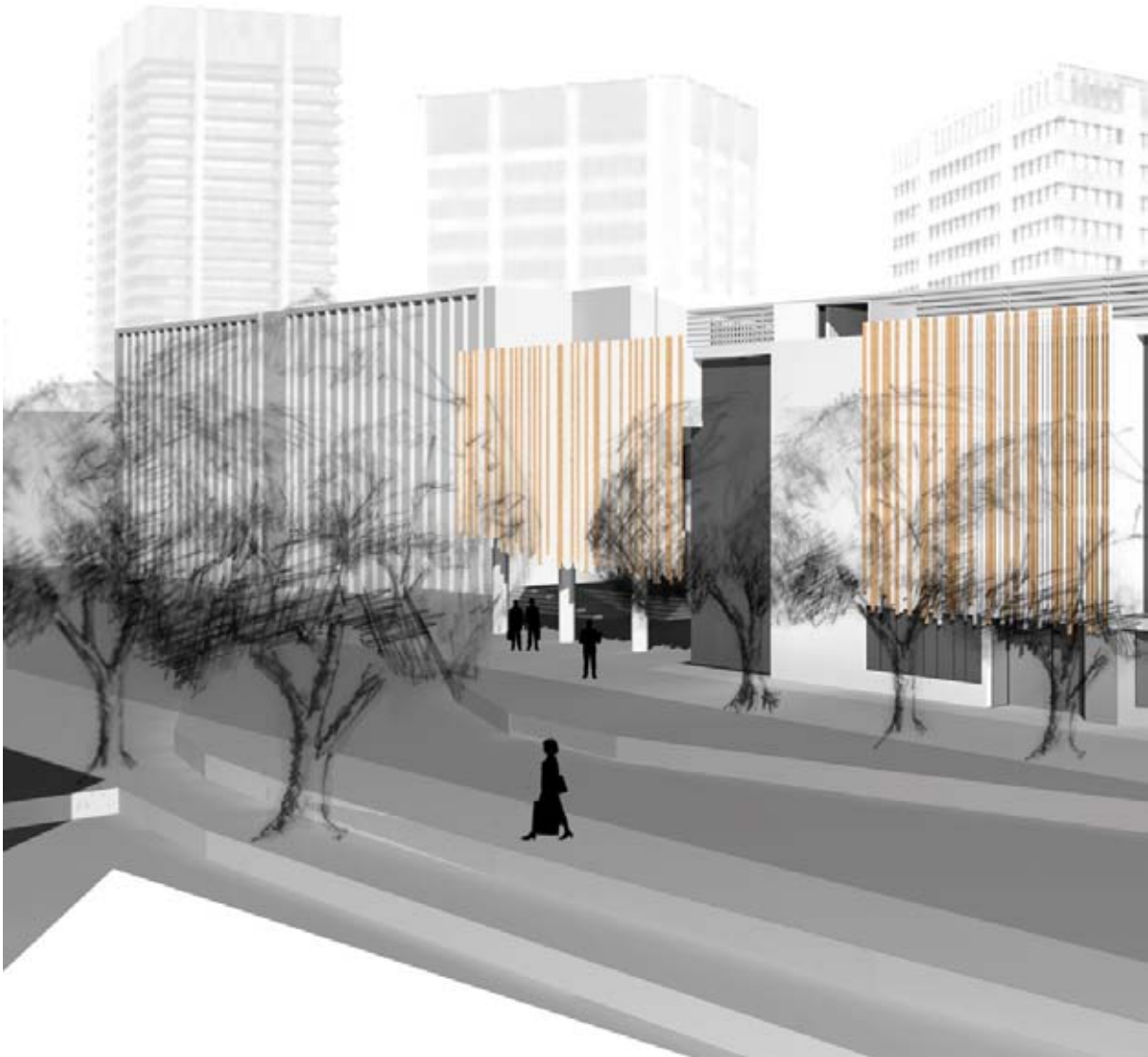
The flooring of receptions and publicly accessible spaces is a rust chemstain screed finish, providing a natural earthy colour and further relating back to traditional building and flooring methods.

SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT- P) V1

PROJECT		ASSESSMENT	
Project title:	Sanctuary	Date:	2010.10.28
Location:	Pretoria	Undertaken by:	Louise de Villiers
Building type:	Offices	Company / organisation:	UP
Internal area (m2):	21 861		



Social	4.2	Economic	4.1	Environmental	3.1
Overall	3.8	Classification			



Chapter 9. Technical Drawings

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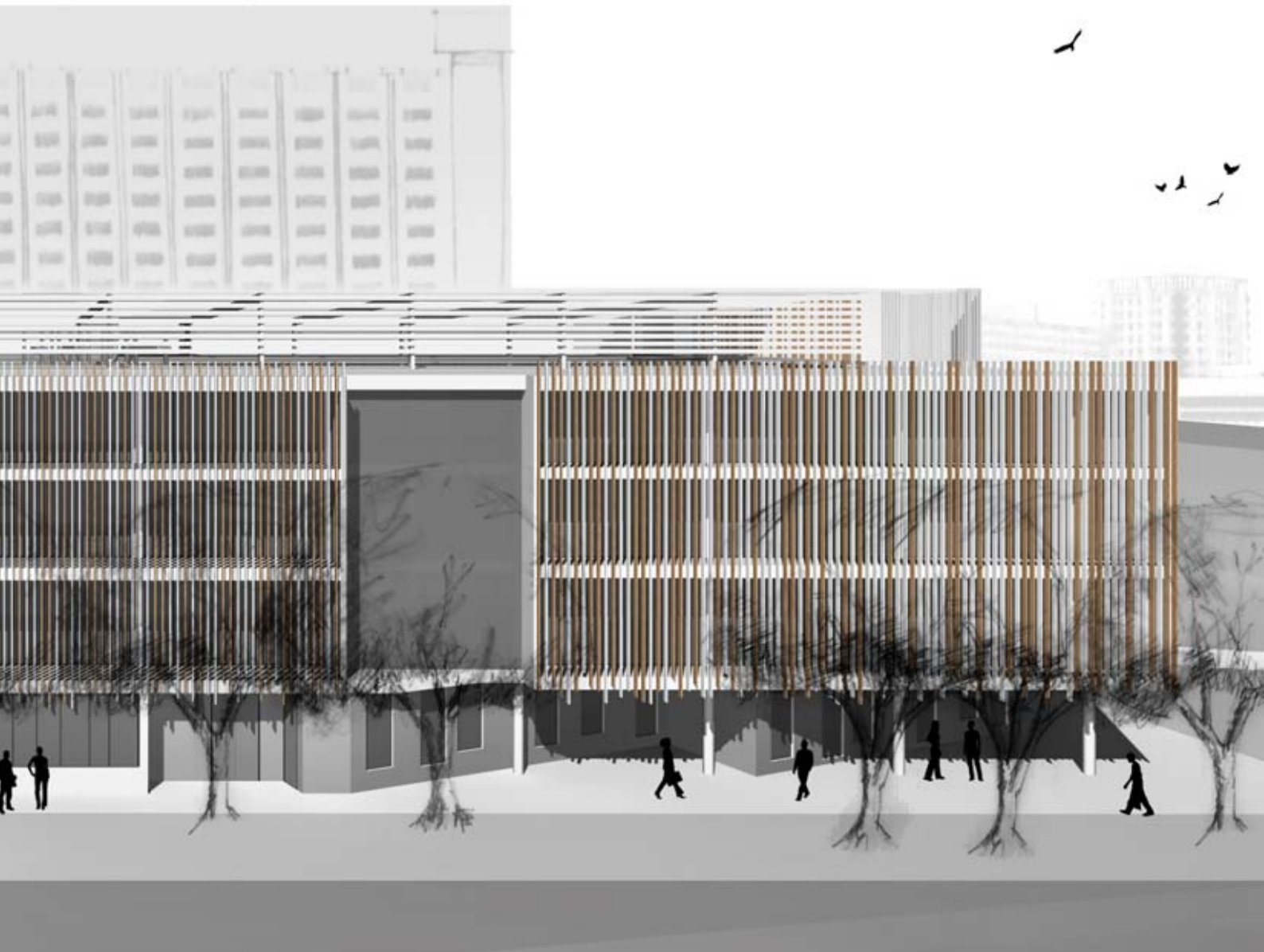


description:

concrete:
25 MPa off-shutter reinforced concrete to sabs .., shuttering oil for concrete MNC-T6 applied to the inner face of shuttering before the casting of concrete to achieve a smooth finish. all edges 45∞ chamfer @ 15. 10 polystyrene movement joint between slab and brickwork

screed:
screed interior - 40 min. level screed with square wall connection.
screed exterior - 25 min. screed with fall of 1:70 towards outlets. 45∞ chamfer of 40 x 40 at all flatroof upturns.

water proofing:
water proofing a - 3 torch-on waterproofing system to sloped screed, continuous with specified side laps, end laps, turn-ups and accessories. paint exposed concrete with aluminium paint
waterproofing b - waterproofing membrane & system to manufacturer's specifications to top of parapet walls, window sills, & flashings

flooring:
screed finish a - grey 7120 seamless epoxy resin quarts floor finish on self leveling isocrete acoustic-k sub-floor screed
screed finish b - wall to wall goosewing grey seamless epoxy resin floor finish on self leveling isocrete acoustic-k sub-floor screed
screed finish c - non-slip polyurethane floor screed with polyurethane coving finished with ëbirds beakí top edge and surface coated with a polyurethane coating seal

carpet tile - 600 x 600 charcoal carpet tile on 40 self leveling isocrete acoustic-k sub-floor screde

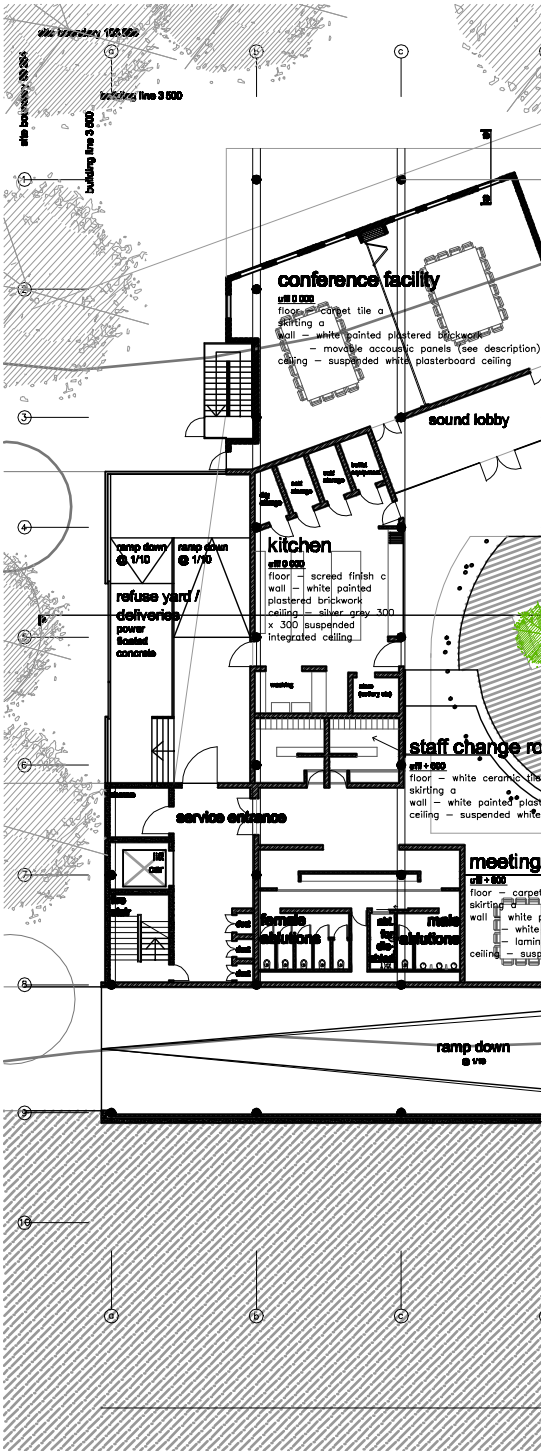
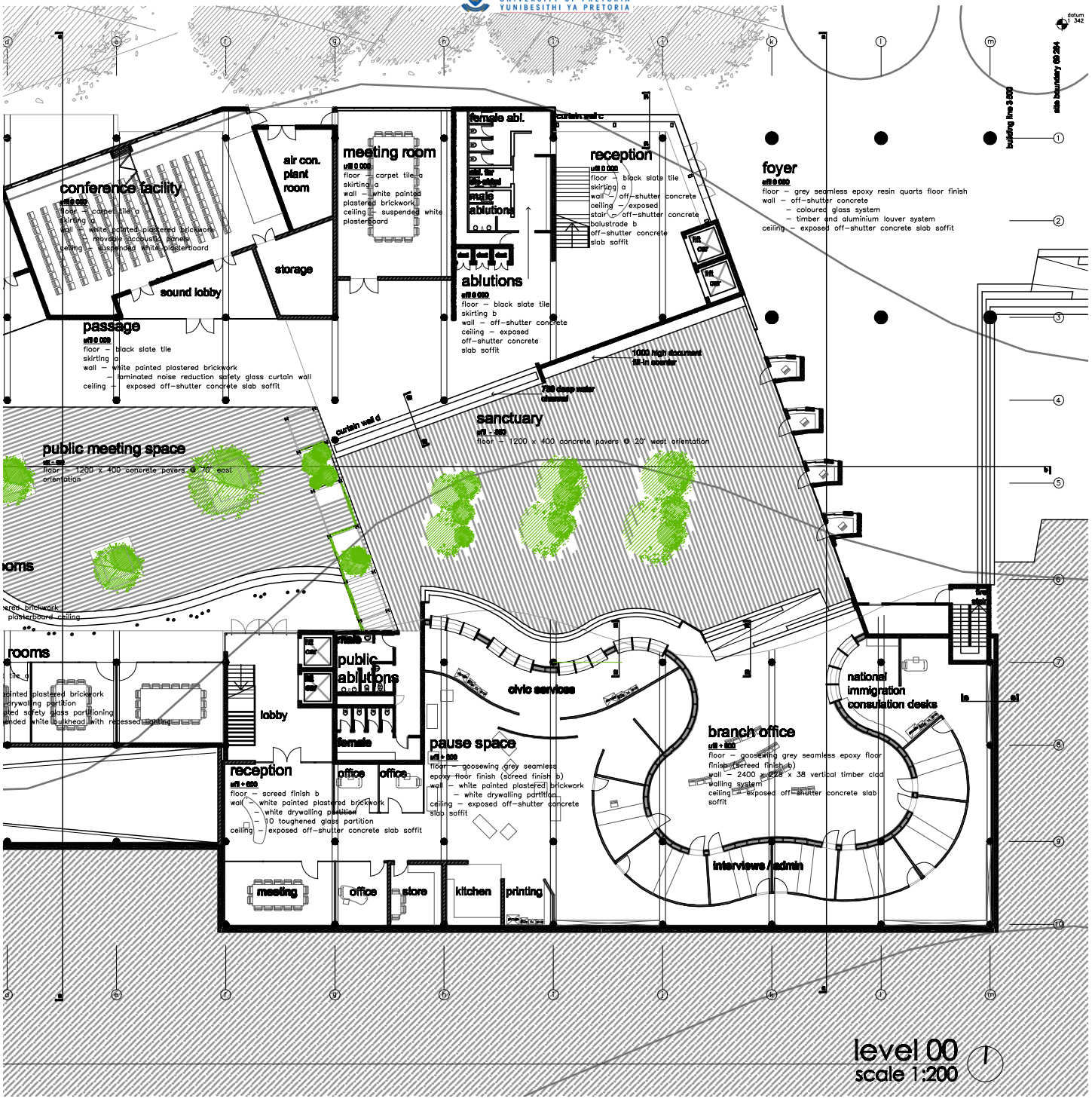


Figure 89: Ground floor plan



level 00
scale 1:200

white italia high pressure laminate finish on all steel 1000 access flooring system with bolted understructure to manufacturer's spec.
slate tile - 600 x 600 black slate tile on 40 screed with 10 joints. 6 mm silicon rubber sealed movement joints where floor and wall meet, at slab joints, in door frame, and areas bigger than 16m≤
sanctuary floor - 1200 x 400 prefab. concrete pavers on 40 sand on waterproofing membrane on screed with 1.70 fall towards outlets

skirting:
skirting a - 18 x 108 pale brown timber skirting screwed to wall with wall plugs
skirting b - 600 x 150 x 15 slate tile skirting
skirting c - 75 x 3 aluminium plate, riveted to drywalling system

envelope:
plastered brickwork - flush joint clay stock bricks. 85 high brick course (1x brick and joint). use 'Brickforce' every layer for 4 layers above openings extending 800 on both sides.

facebrick - flush joint montana travertine facebrick, 10 polystyrene movement joint between slab and brickwork

plasterwork - 10 interior & 15 exterior to walls. steel trowelled smooth. 10 drip joints to sofit edges

tiled walls
ablution walls a - full length 600 x 10 black slate strip tiles, 5 joints with white grouting
ablution walls b - full length beige ceramic tile, 5 joints with white grouting

timber wall - 228 x 38 vertical pale meranti cladding on 50 x 50 purlins on 228 x 76 saligna timber struc-

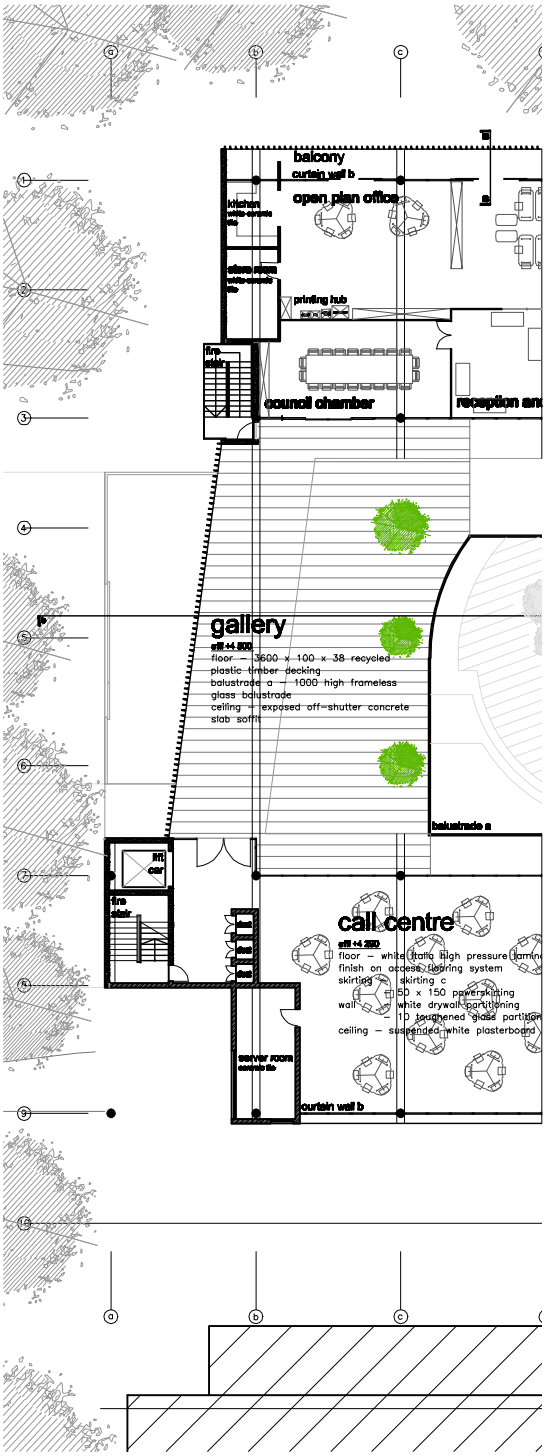
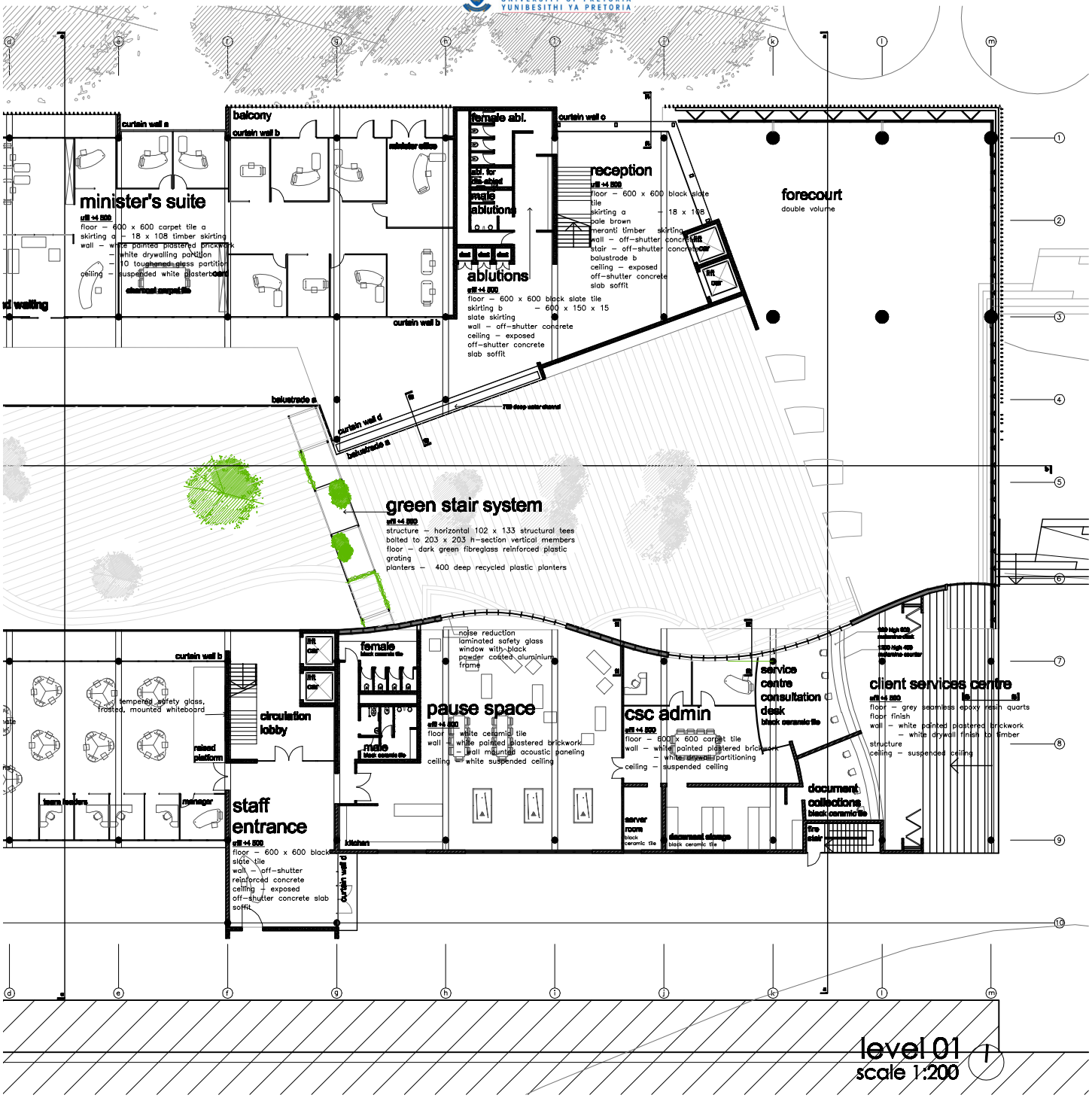


Figure 90: First floor plan



ture bolted to concrete slab, with acoustic paneling interior finish

curtain walling
curtain wall a - 3210 x 2250 x 8.76 self cleaning laminated safety glass with black powder coated aluminium frame
curtain wall b - 6 clearvue smartglass manually operable 2860 x 1000 vertical pivot window with black powder coated aluminium frame
curtain wall c - 3210 x 2250 x 8.76 frameless self cleaning noise reduction laminated safety glass fixed to 270 x 170 x 8 rectangular hollow section steel column with stainless steel glass spider clamp and with clear sealant between pane edges. Steel column base plated bolted to concrete slab, covered with screed and tiling
curtain wall d - 8.76 noise reduction safety glass with black 3550 x 1500 powder coated aluminium frame

glass partitioning - 10 tempered glass partition with aluminium head and base channels and flush aluminium dry joint

drywalling - 12 tapered gypsum plasterboard panels fixed to steel track and stud system, installation to manufacturer's spec.

movable partition - full length 1200 wide movable accoustic wall partition system, with alluminium top track and retractable top and bottom seals to manufacturer's spec.

wall mounted acoustic panels - 610 x 1220 x 56 acoustic panel, installation to manufacturer's spec

louver system - vertical louvre system with intermittent 145 x 38 aluminium and recycled plastic louvres @ 300 c/c bolted to outside of concrete slab or steel

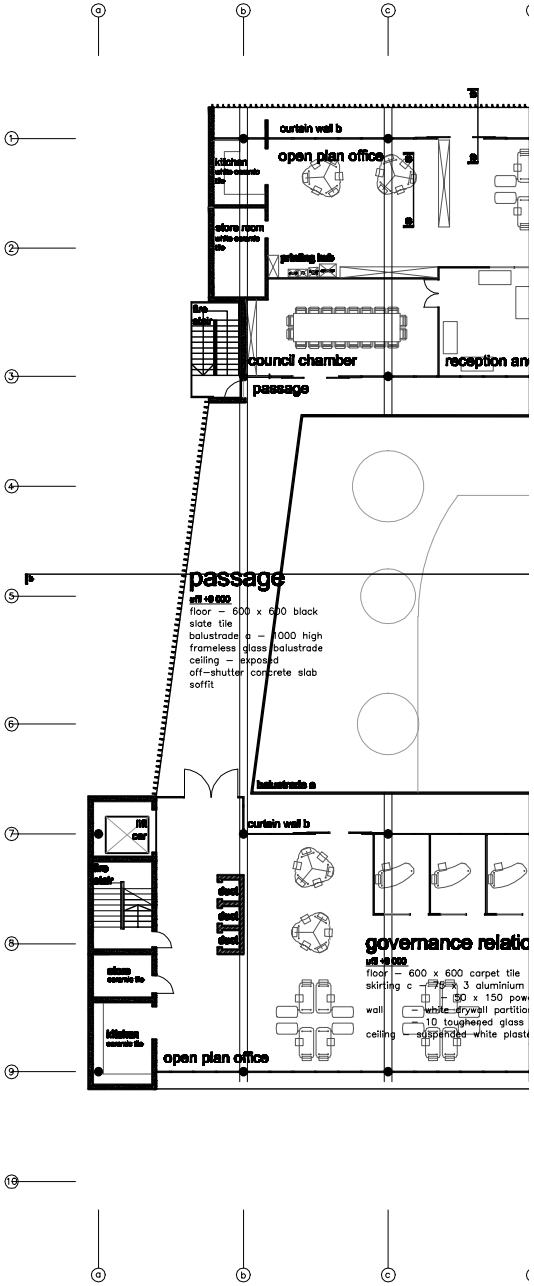
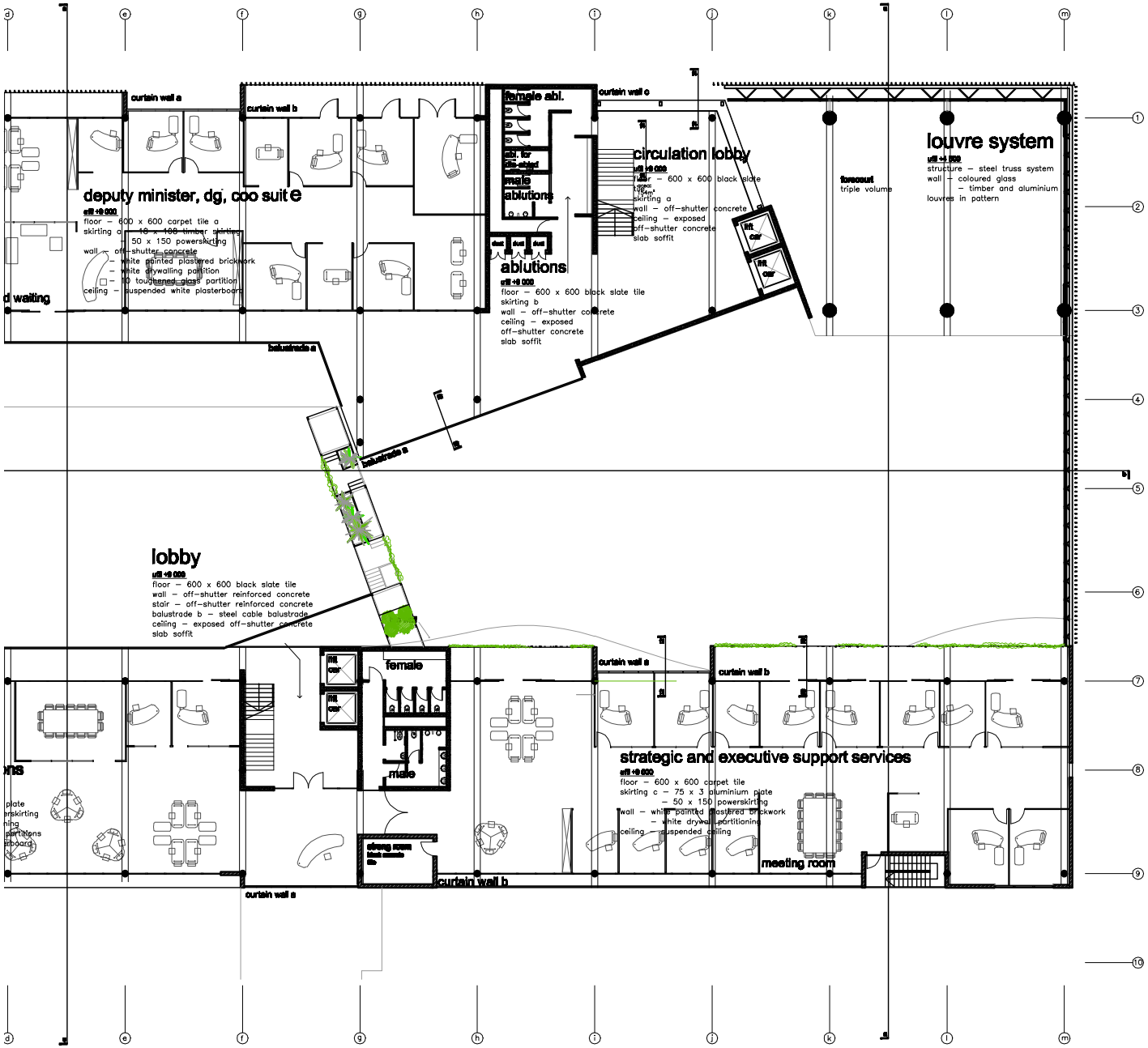


Figure 91: Second floor plan



level 02
scale 1:200

truss system where applicable

cable trellis system - 3 ÿ steel cable, fixed to channel frame with threaded plug @ intervals according to design, and 100 x 50 c channel welded, @ intervals according to design, to 100 x 50 stainless steel c-channel frame bolted to inside of concrete structure, with 400 x 400 black painted recycled plastic planters with perforated base on base plate

ceiling
ceiling a - exposed concrete soffit. remove all rough edges & joints
ceiling b - 9.5 flush plastered “rhinoboard” fixed to concrete with alluminium ceiling suspender to manufacturer’s spec.
ceiling c - prefabricated gypsum suspended bulkhead with recessed lighting, installation to manufacturer’s spec.
ceiling d - silver grey 300 x 300 suspended ceiling system with aluminium frame, fibreglass reinforced plastic tiles, ceiling ventilator and ceiling lamp. installation to manufacturer’s spec.

stair:
off-shutter reinforced concrete stair with staggered soffit. 38 x 300 pale brown hardwood timber treads with rounded edge. steel cable balustrade (balustrade b)

balustrades:
balustrade a - 1000 x 1000 x 12 toughened ‘Armourplate’ glass panels fixed to side of concrete slab with stainless steel fixing clamps to manufacturer’s spec. @ 500 c/c and with clear sealant between pane edges
balustrade b - 3 diameter stainless steel cable threaded through 10 diameter holes perforated @ 100 c/c intervals in 50 x 10 x 1000 blackened stain-

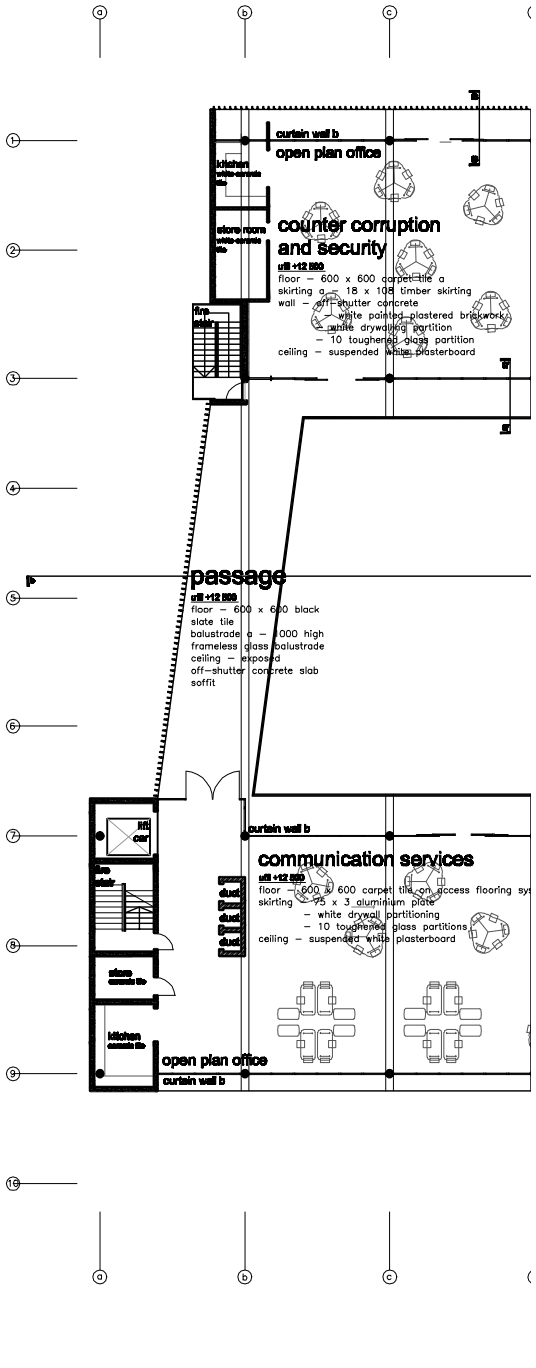
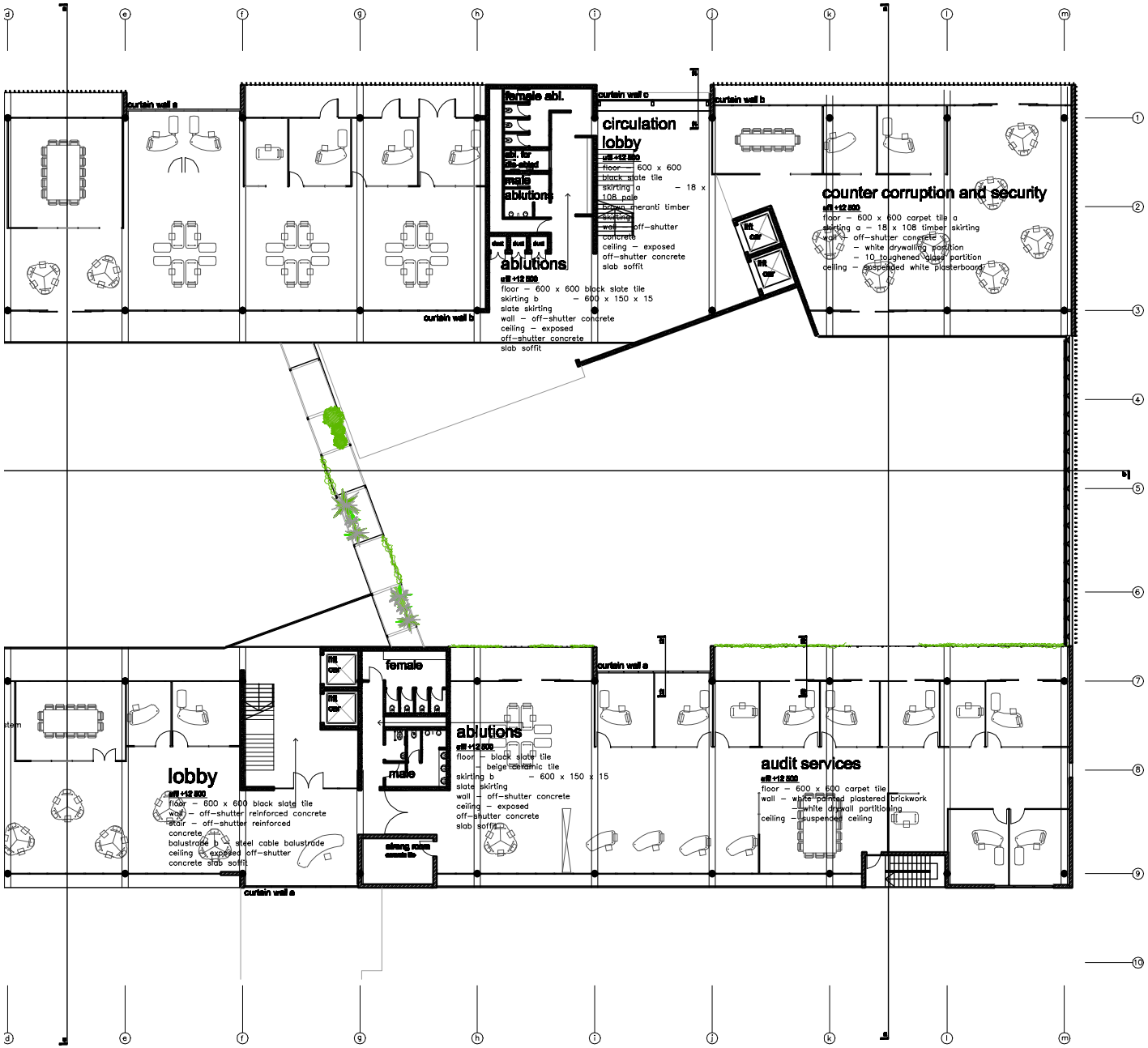


Figure 92: Third floor plan



level 03
scale 1:200

less steel balusters cast in concrete slab, and fixed, with stainless steel receivers and pull lock threaded eye fitting to manufacturer's spec., to 50 x 50 x 1000 blackened stainless steel end posts cast in concrete slab

fire escape:
203 x 203 h-section steel fire escape structure clad with wire mesh, bolted to steel structure with flat plate cover with galvanised teel grating steps covered with non-slip studded rubber, treads @ 300, risers @ 170 with 1000 high steel balustrade 50 x 50 square steel handrail with 25 x 25 steel balusters @ 250 c/c

green stair system:
structure - 38 deep dark green dura tread anti slip fibreglass floor grating panels fixed with stainless steel square recessed holding down clamps to 102 x 133 structural tees bolted to 203 x 203 h-section vertical steel members bolted to concrete floor slabs

planting container - 400 high recycled plastic planter held in place by 25 x 25 steel angle fixed to floor grating with recessed holding down clamps. perforated irrigation pipes to be fixed to underside of structural tees with steel clamps

cable trellis - 3 diameter wire rope with yoke end fittings bolted to structural tees in pattern

roof:
concrete roof - aluminium paint on torched on bitumen waterproofing on 25 min. screed with fall of 1:70 towards outlets. 45∞ chamfer of 40 x 40 at all flatroof upturns. 160 diameter upvc rainwater downpipes cast into reinforced concrete columns

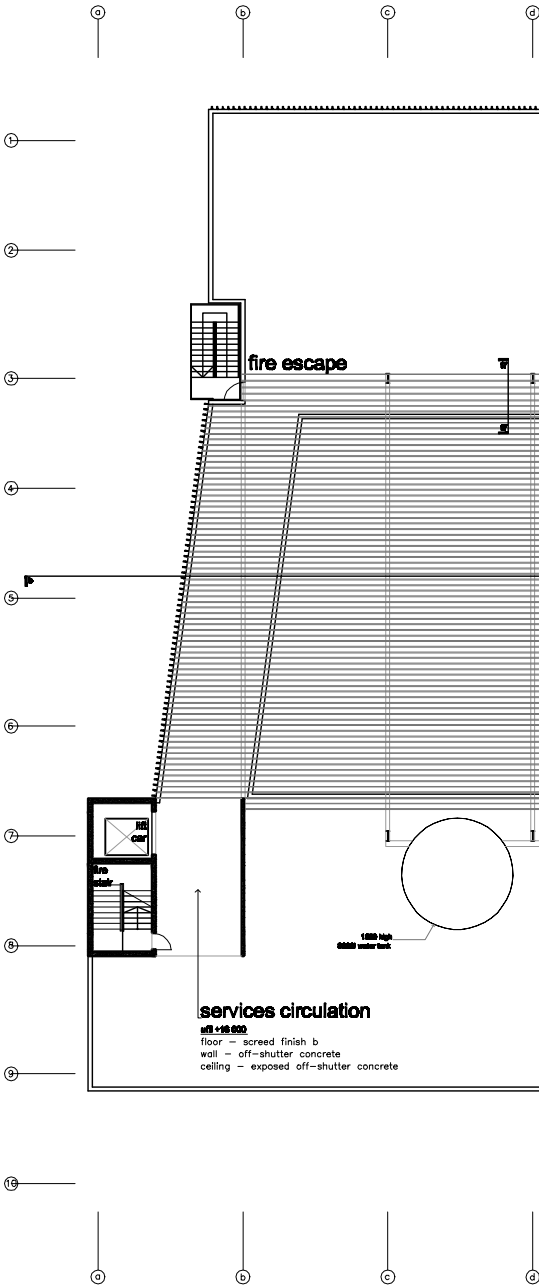
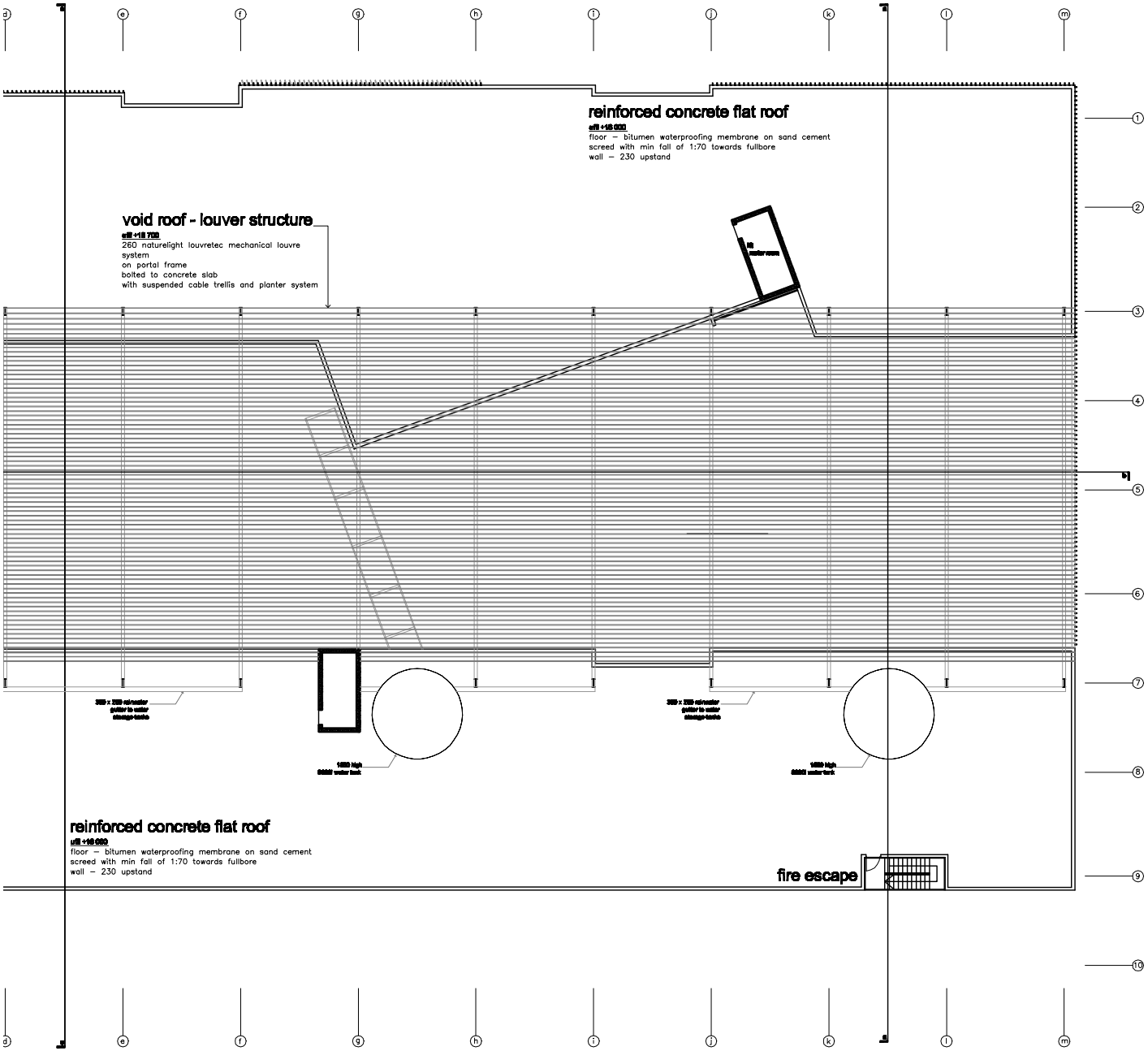


Figure 93: Roof plan



roof
scale 1:200

louver system:
2600 x 3000 “260 naturelight louvretec” mechanical louvre system to manufacturers spec. bolted to portal frame, bolted to concrete slab with 50 x 50 runners @ 1500 c/c. suspended 10000 x 500 x 12 wire mesh trellis and planter system with top track

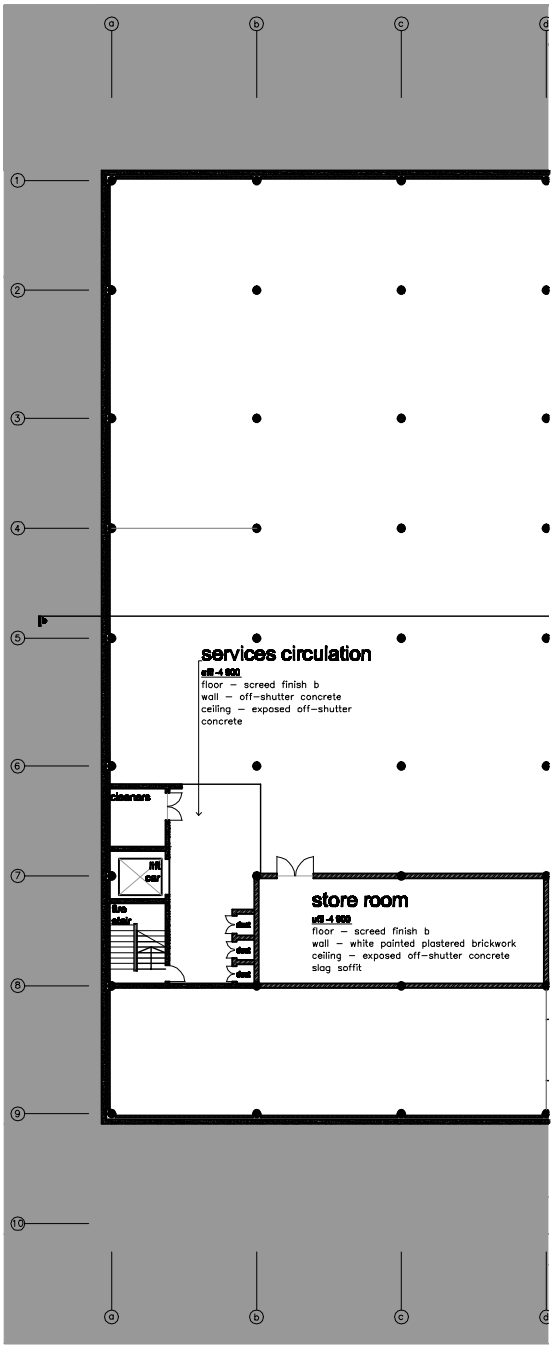
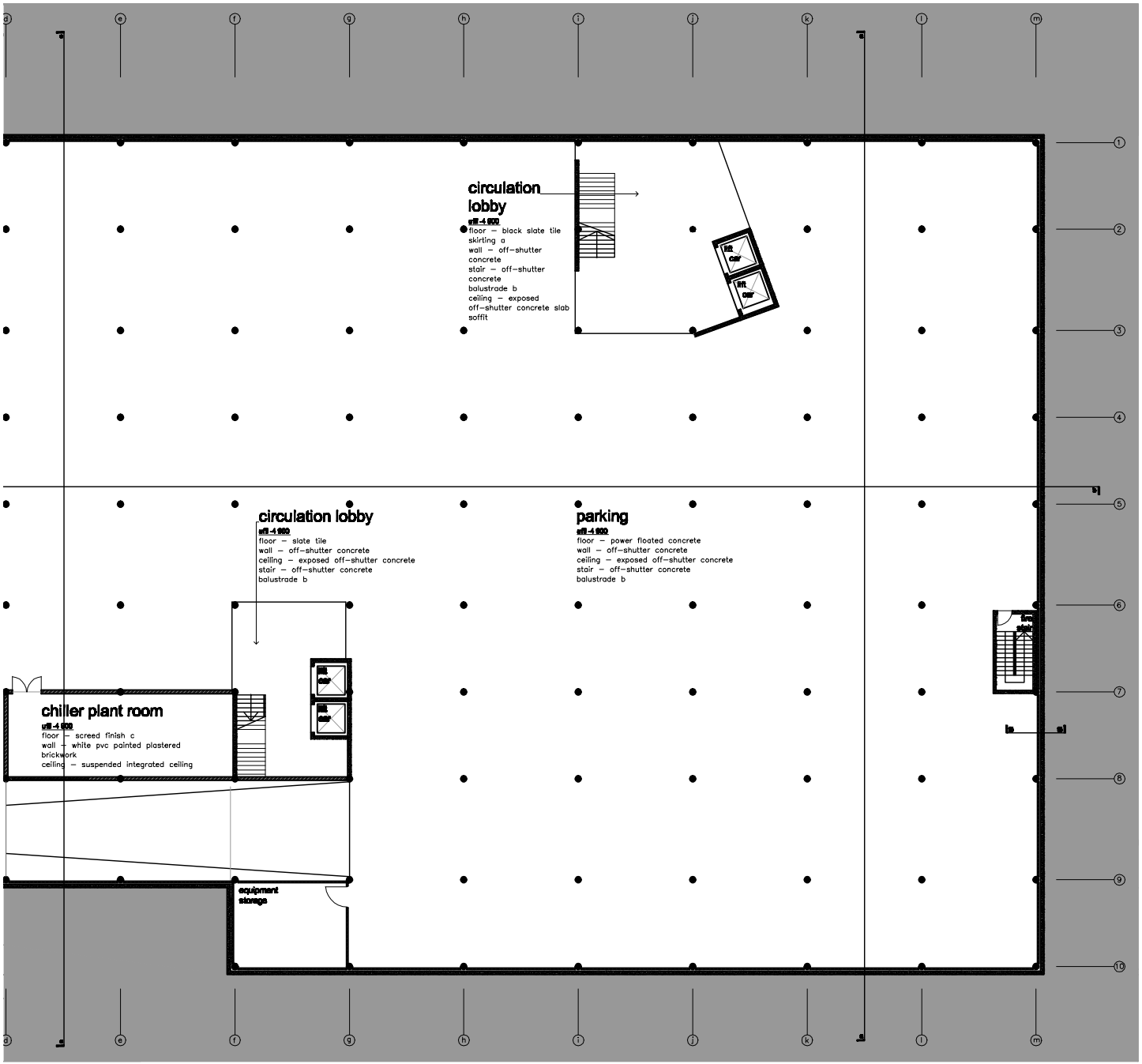
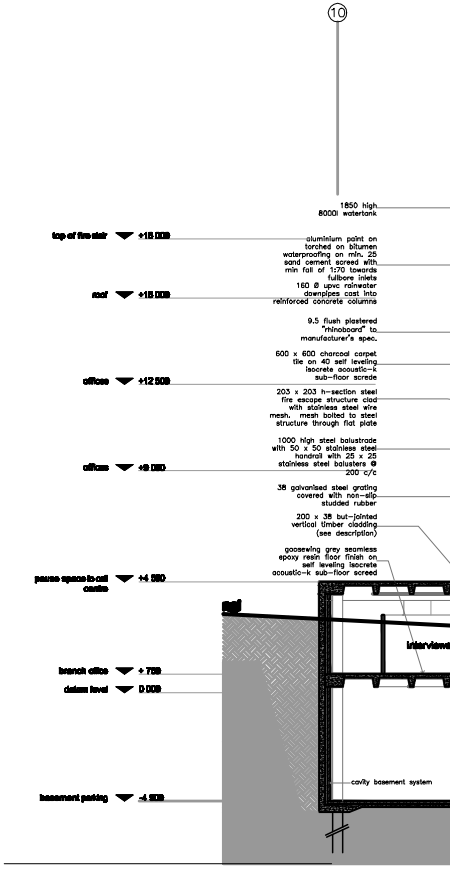


Figure 94: Basement plan

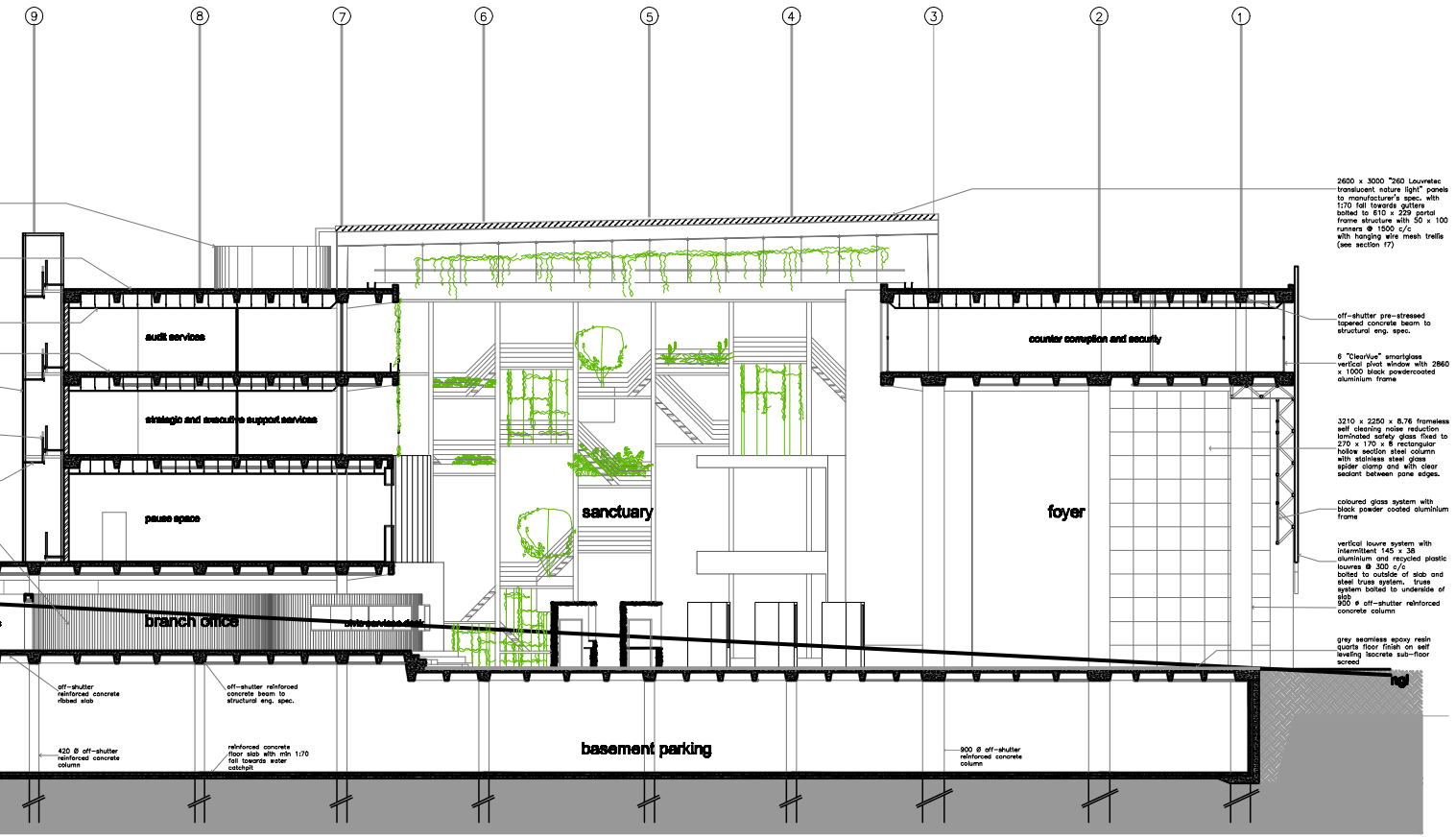


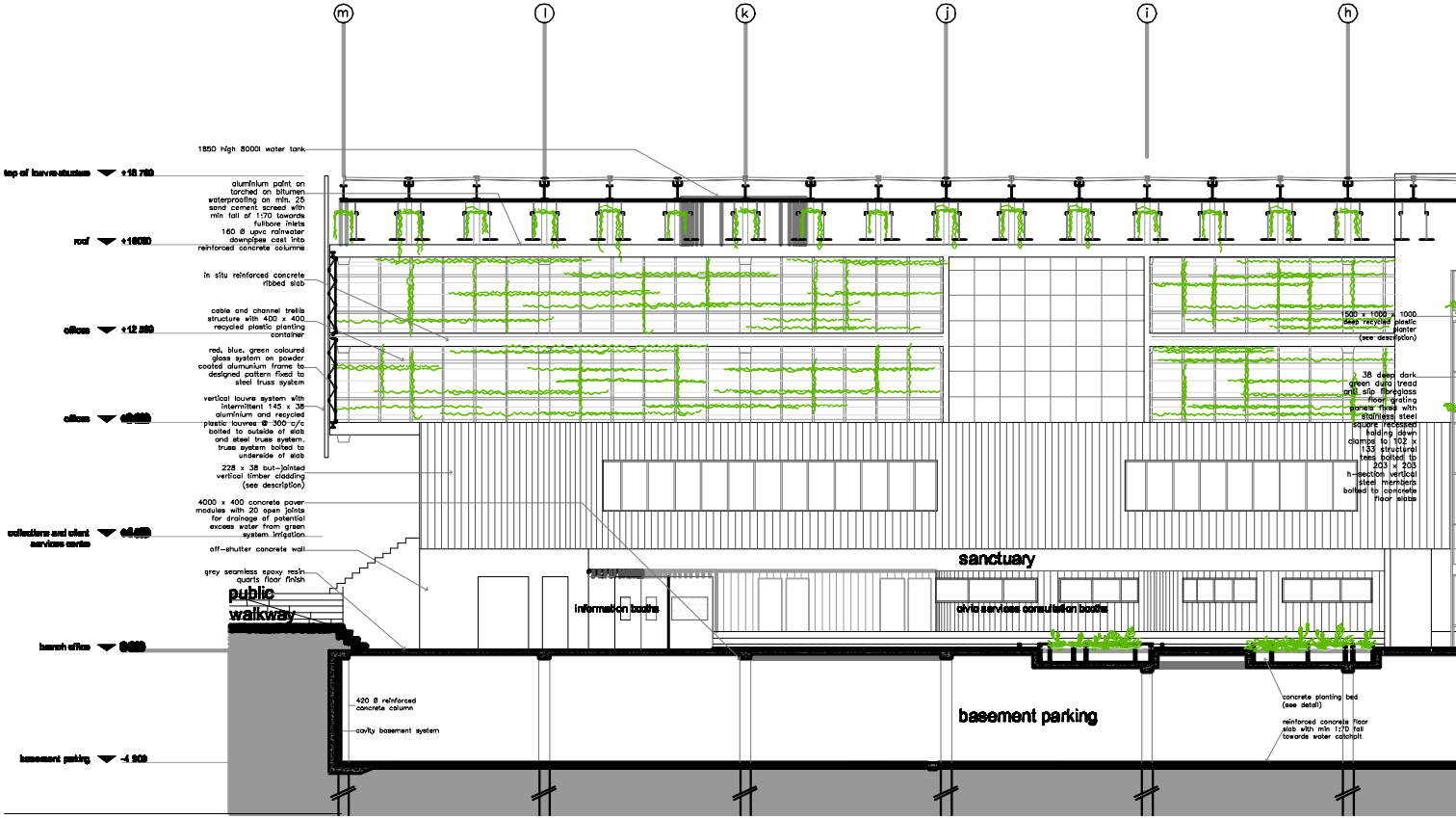
level -1
scale 1:200



section a _ scale 1:100

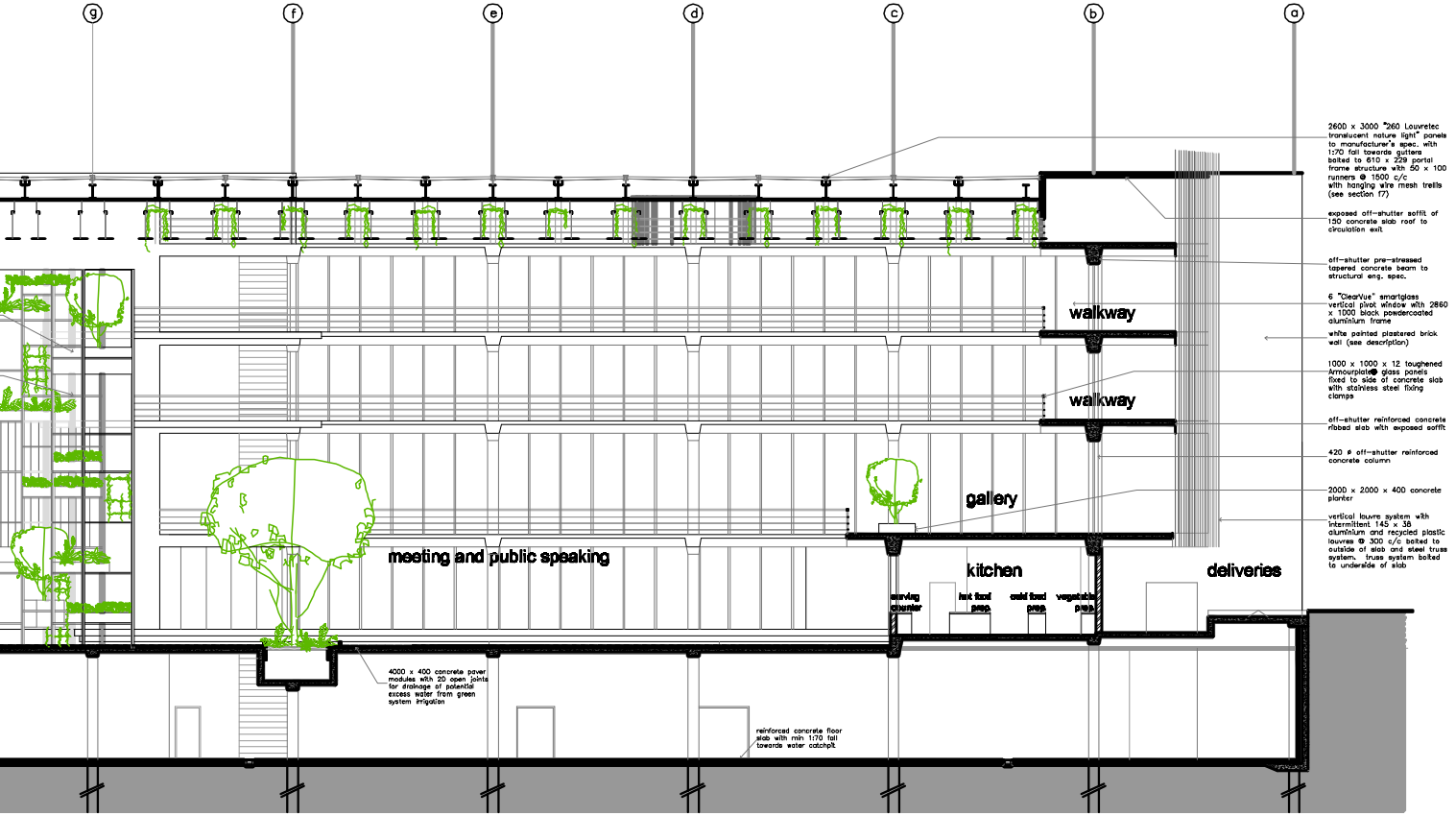
Figure 95: Section a

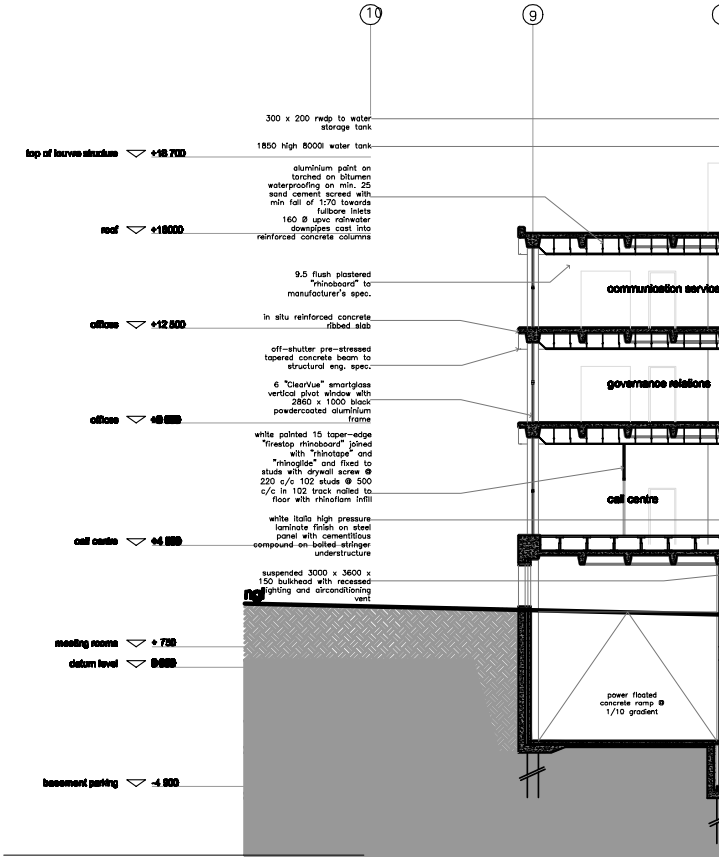

9
8
7
6
5
4
3
2
1
audit services
strategic and executive support services
pause space
sanctuary
foyer
counter corruption and security
branch office
basement parking
2600 x 3000 "260 Louvretec translucent nature light" panels to manufacturer's spec. with 1:70 fall towards gutters bolted to 610 x 229 portal frame structure with 50 x 100 runners @ 1500 c/c with hanging wire mesh trellis (see section f7)
off-shutter pre-stressed tapered concrete beam to structural eng. spec.
6 "ClearVue" smartglass vertical pivot window with 2860 x 1000 black powdercoated aluminium frame
3210 x 2250 x 8.76 frameless self cleaning noise reduction laminated safety glass fixed to 270 x 170 x 8 rectangular hollow section steel column with stainless steel glass spider clamp and with clear sealant between pane edges.
coloured glass system with black powder coated aluminium frame
vertical louvre system with intermittent 145 x 38 aluminium and recycled plastic louvres @ 300 c/c bolted to outside of slab and steel truss system. truss system bolted to underside of slab
900 ø off-shutter reinforced concrete column
grey seamless epoxy resin quartz floor finish on self leveling tascrete sub-floor screed
off-shutter reinforced concrete ribbed slab
off-shutter reinforced concrete beam to structural eng. spec.
420 ø off-shutter reinforced concrete column
reinforced concrete floor slab with min 1:70 fall towards water catchpit
900 ø off-shutter reinforced concrete column



section b _ scale 1:100

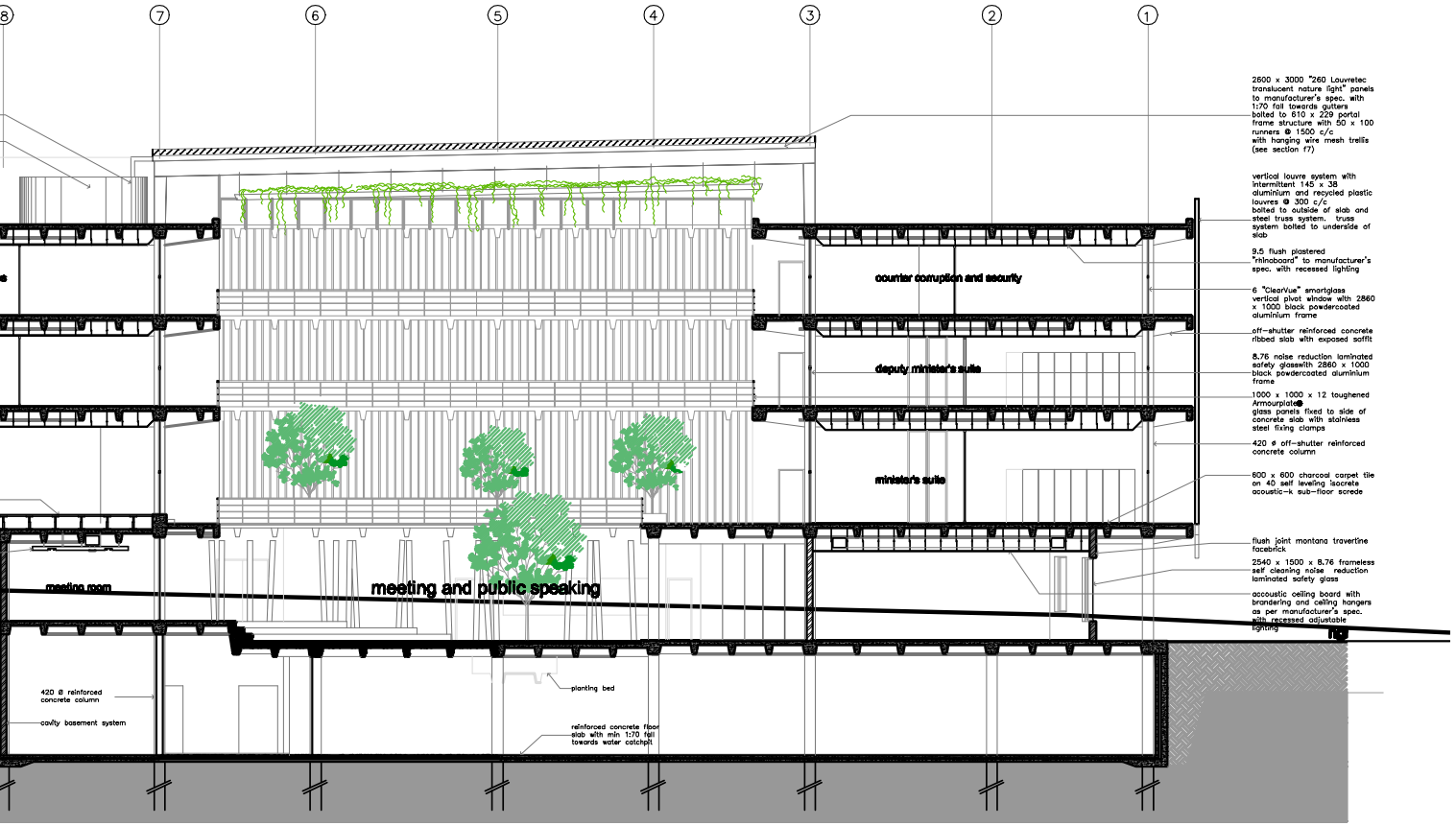
Figure 96: Section b


g
f
e
d
c
b
a
2600 x 3000 "260 Louvretec translucent nature light" panels to manufacturer's spec. with 1:70 fall towards gutters bolted to 610 x 229 portal frame structure with 50 x 100 runners @ 1500 c/c with hanging wire mesh trells (see section f7)
exposed off-shutter soffit of 150 concrete slab roof to circulation exit
off-shutter pre-stressed tapered concrete beam to structural eng. spec.
6 "ClearVue" smartglass vertical pivot window with 2860 x 1000 black powdercoated aluminium frame
white painted plastered brick wall (see description)
1000 x 1000 x 12 toughened Armourplate® glass panels fixed to side of concrete slab with stainless steel fixing clamps
off-shutter reinforced concrete ribbed slab with exposed soffit
420 ø off-shutter reinforced concrete column
2000 x 2000 x 400 concrete planter
vertical louvre system with intermittent 145 x 38 aluminium and recycled plastic louvres @ 300 c/c bolted to outside of slab and steel truss system. truss system bolted to underside of slab
walkway
walkway
gallery
meeting and public speaking
kitchen
deliveries
serving counter
hot food pass
cold food pass
vegetable pass
4000 x 400 concrete paver modules with 20 open joints for drainage of potential excess water from green system irrigation
reinforced concrete floor slab with min 1:70 fall towards water catchpit



section c _ scale 1:100

Figure 97: Section c


8
7
6
5
4
3
2
1
2600 x 3000 "260 Louvretec translucent nature light" panels to manufacturer's spec. with 1:70 fall towards gutters bolted to 610 x 229 portal frame structure with 50 x 100 runners @ 1500 c/c with hanging wire mesh trellis (see section f7)
vertical louvre system with intermittent 145 x 38 aluminium and recycled plastic louvres @ 300 c/c bolted to outside of slab and steel truss system. truss system bolted to underside of slab
9.5 flush plastered "nilcoboard" to manufacturer's spec. with recessed lighting
6 "ClearVue" smartglass vertical pivot window with 2860 x 1000 black powdercoated aluminium frame
off-shutter reinforced concrete ribbed slab with exposed soffit
8.76 noise reduction laminated safety glasswith 2860 x 1000 black powdercoated aluminium frame
1000 x 1000 x 12 toughened Armourplate® glass panels fixed to side of concrete slab with stainless steel fixing clamps
420 ø off-shutter reinforced concrete column
600 x 600 charcoal carpet tile on 40 self leveling isocrete acoustic-k sub-floor screde
flush joint montana travertine facebrick
2540 x 1500 x 8.76 frameless self cleaning noise reduction laminated safety glass
accoustic ceiling board with brandering and ceiling hangers as per manufacturer's spec. with recessed adjustable lighting
counter corruption and security
deputy minister's suite
minister's suite
meeting room
meeting and public speaking
420 ø reinforced concrete column
cavity basement system
planting bed
reinforced concrete floor slab with min 1:70 fall towards water catchpit

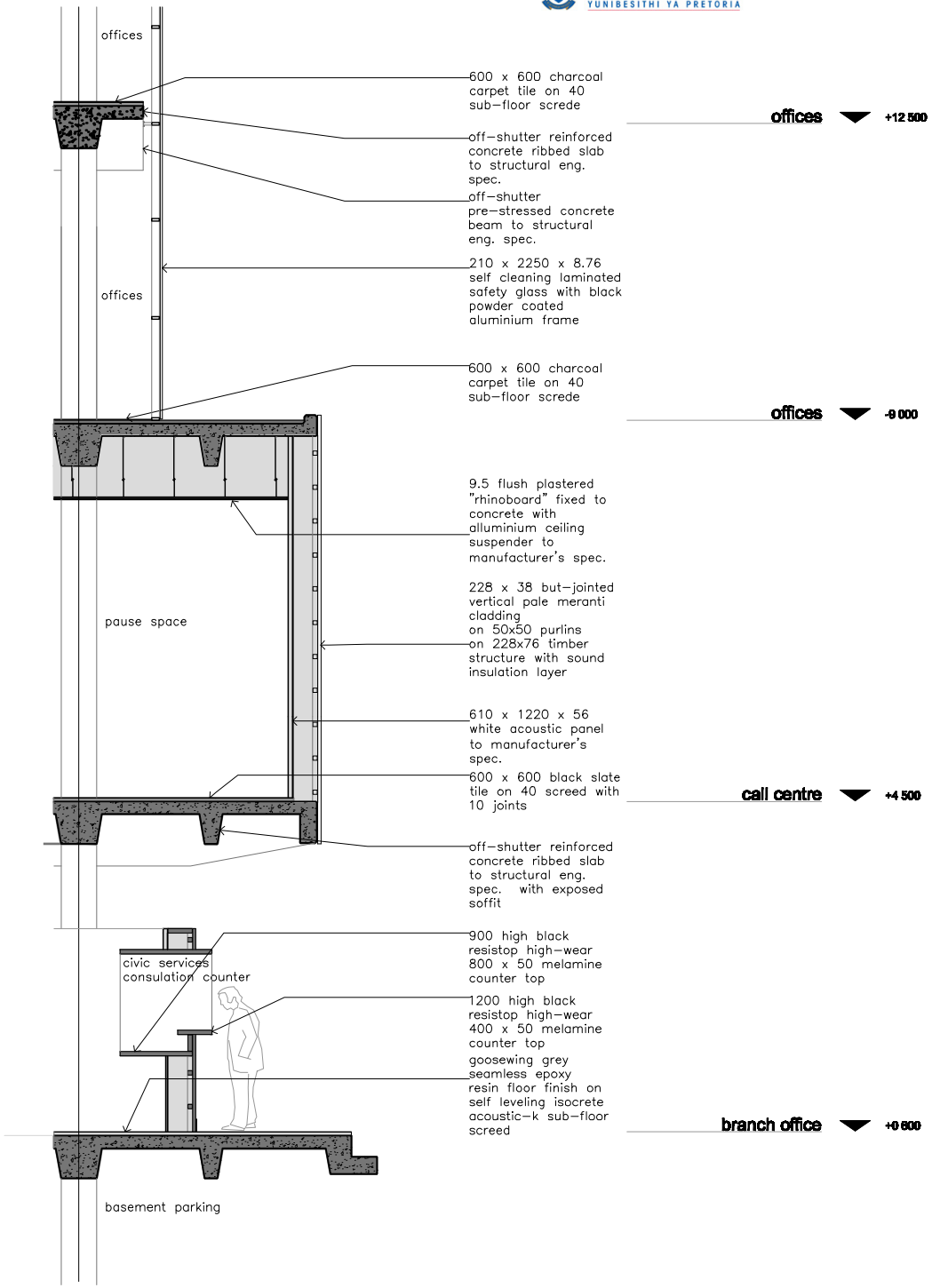


Figure 98: section f1 (1.50)

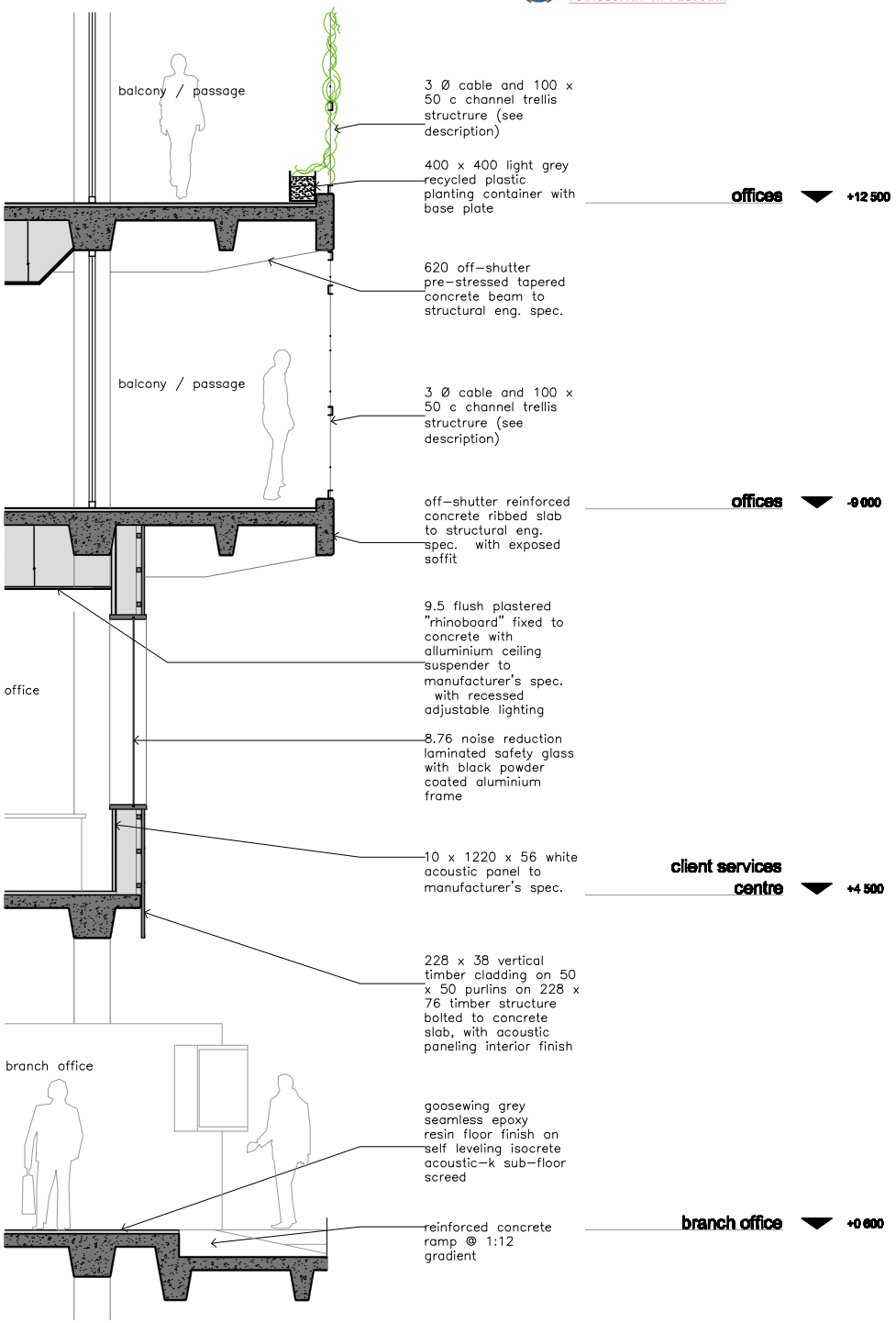


Figure 99: section f2 (1.50)

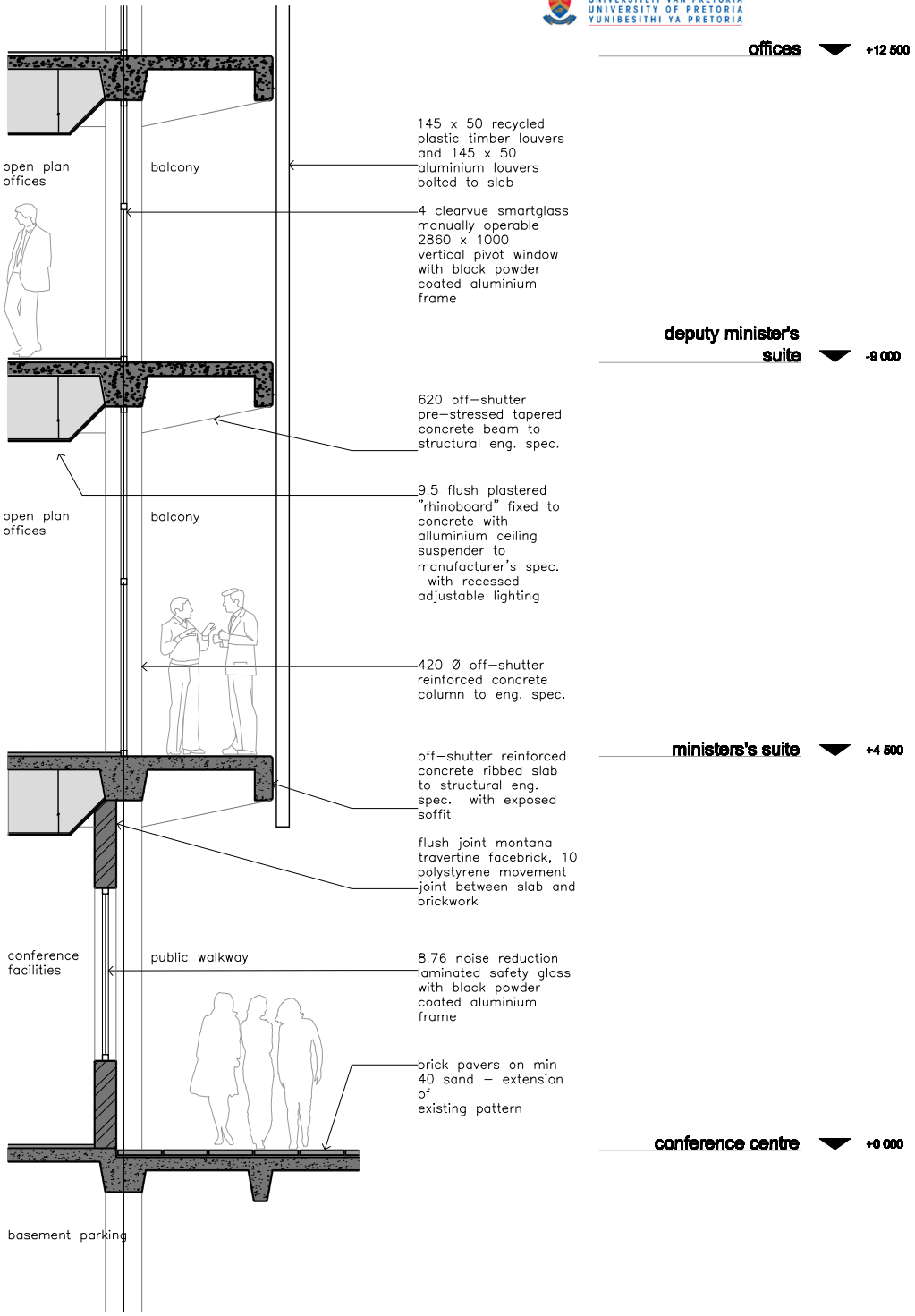


Figure 100: section f3 (1.50)

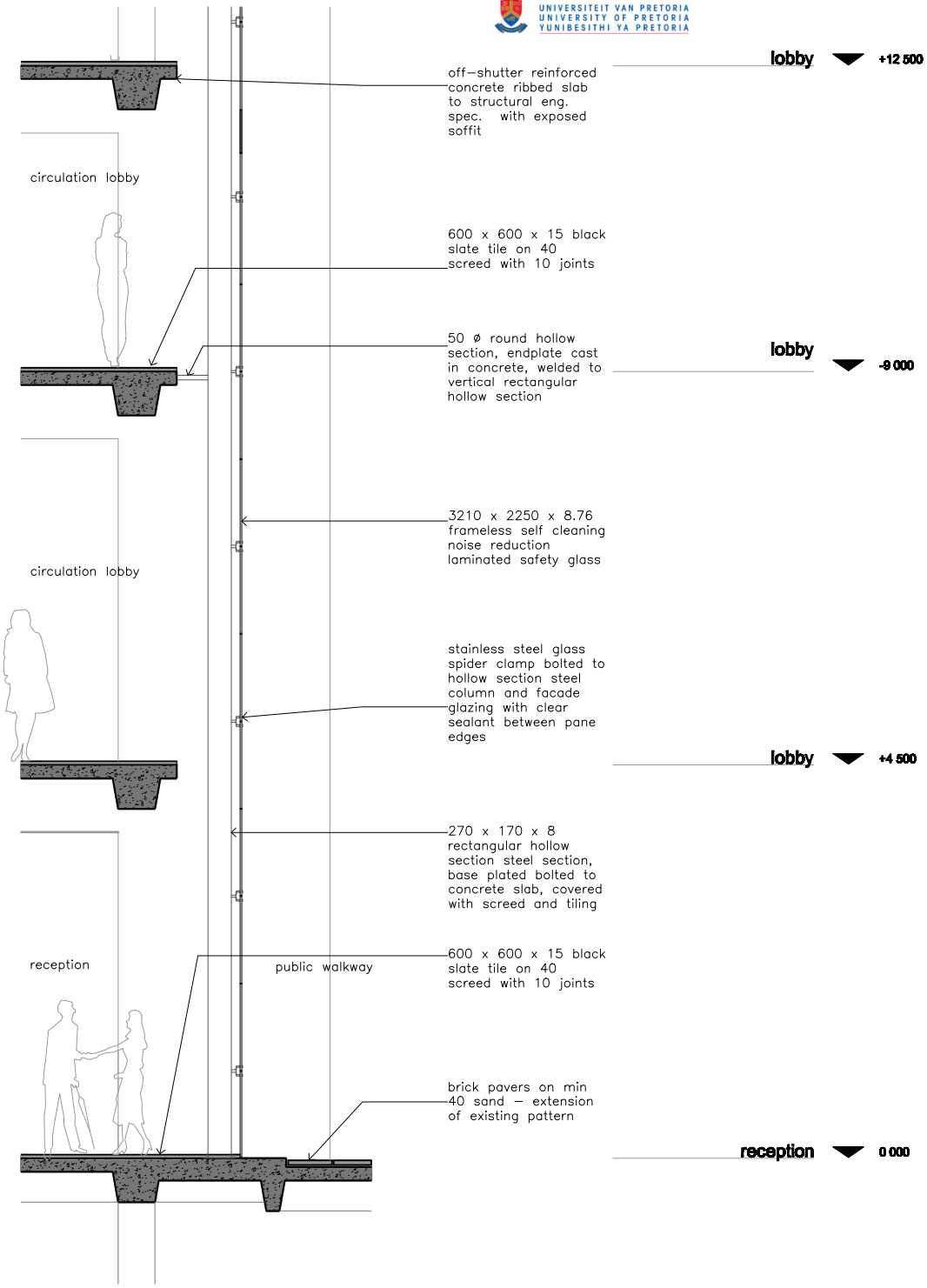


Figure 101: section f4 (1.50)

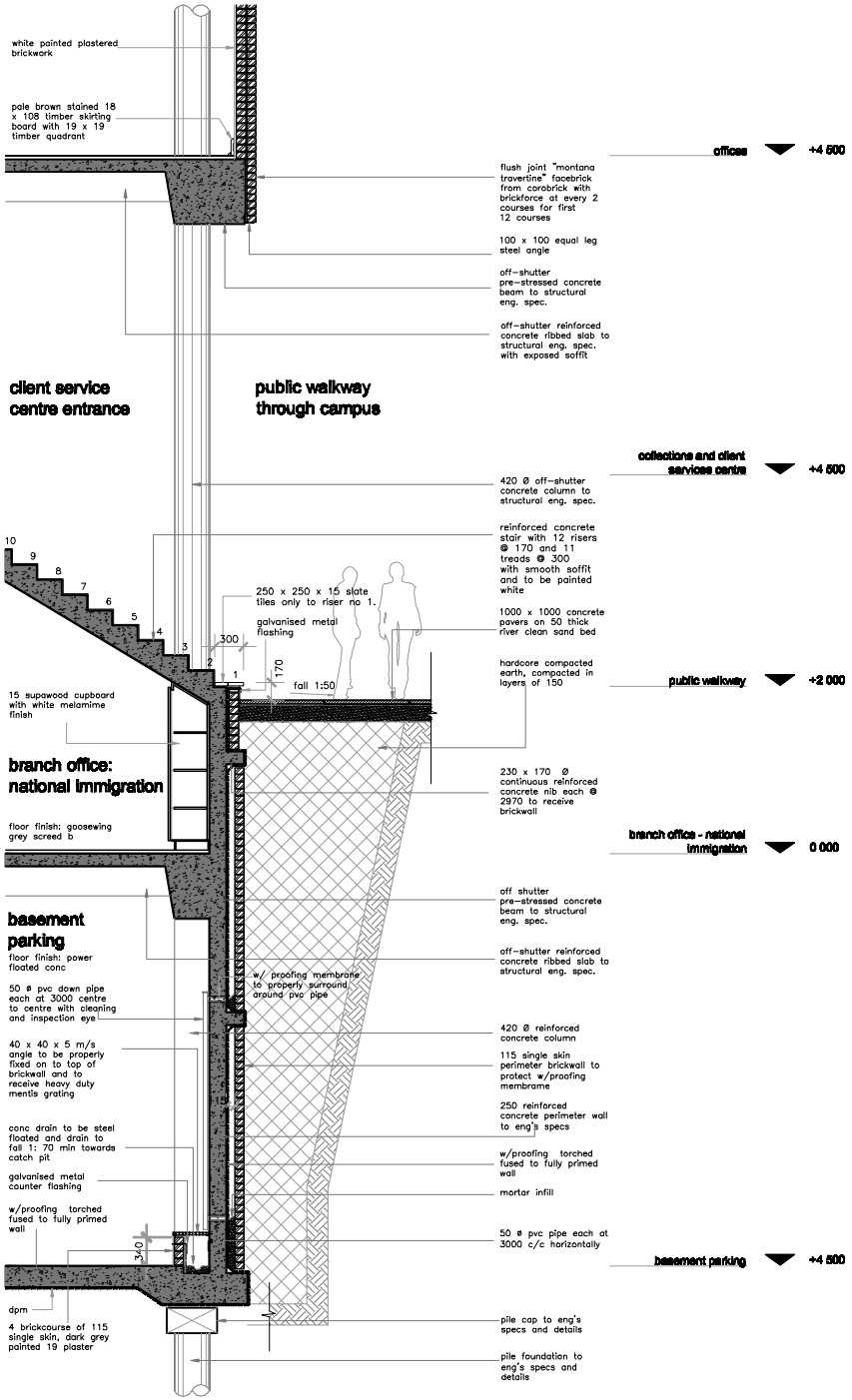


Figure 102: section f5 (1.20)

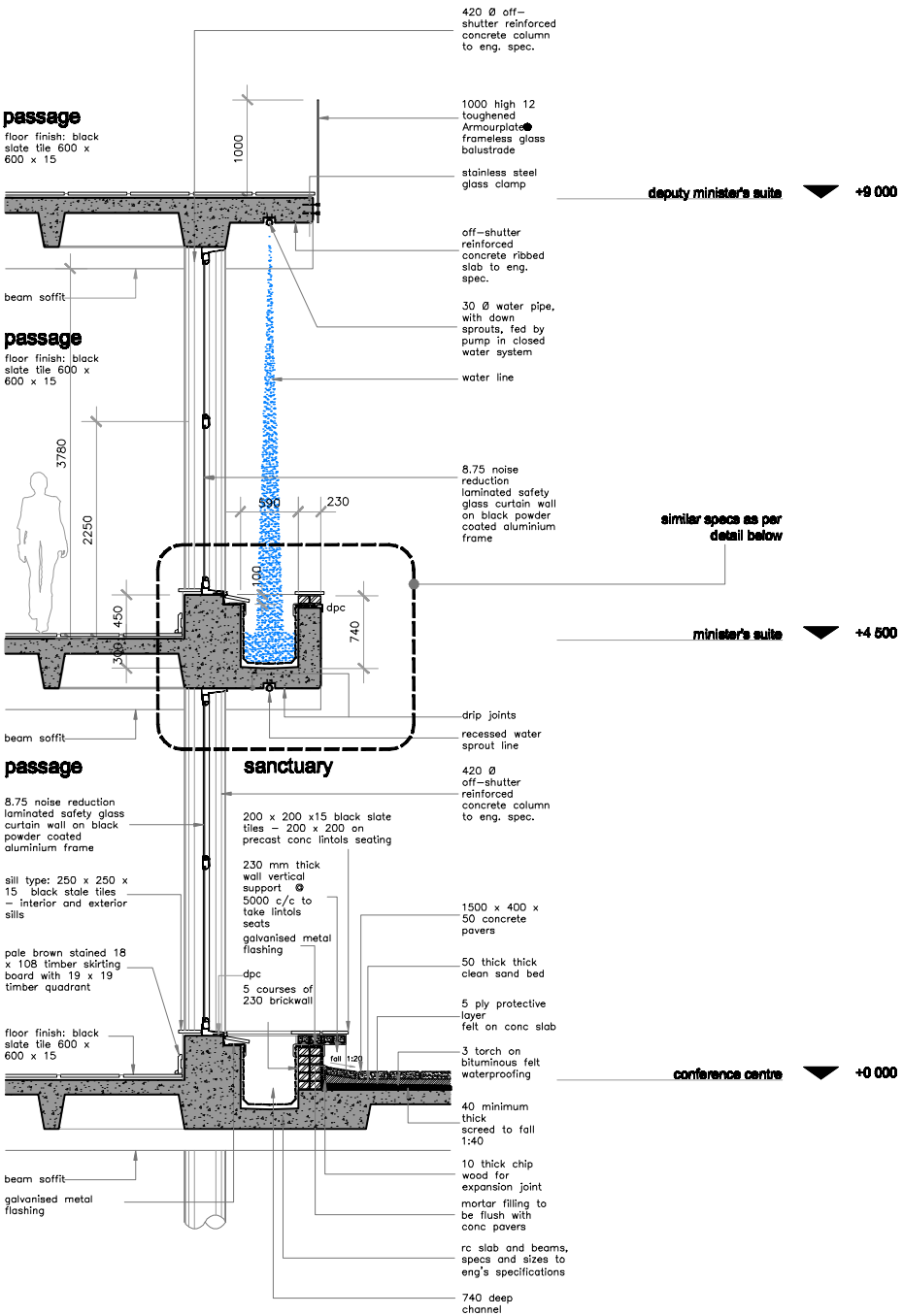


Figure 103: section f6 (1.20)

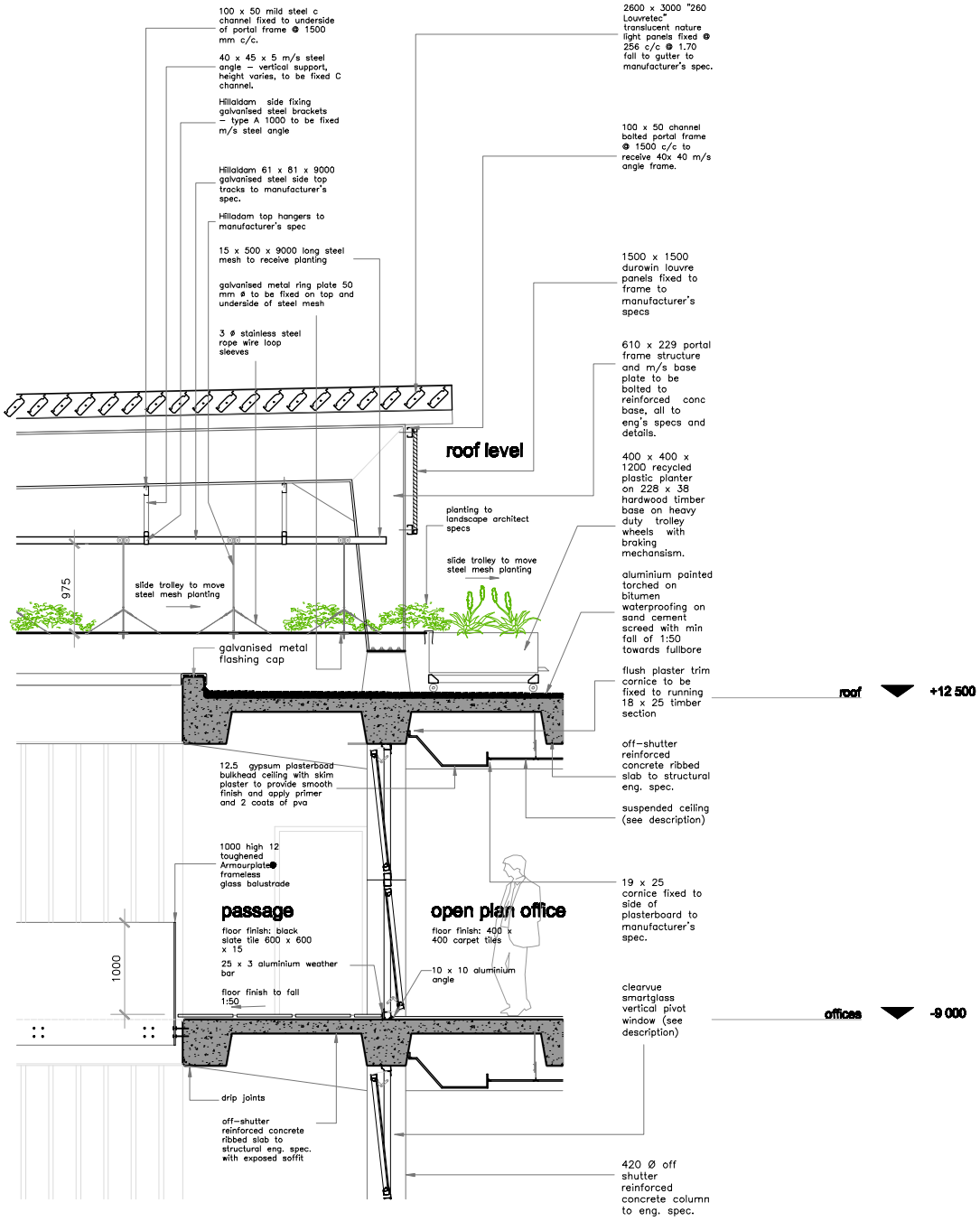


Figure 104: section f7 (1.20)

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Image references

All images not referenced in this list was created or photographed by the author.

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