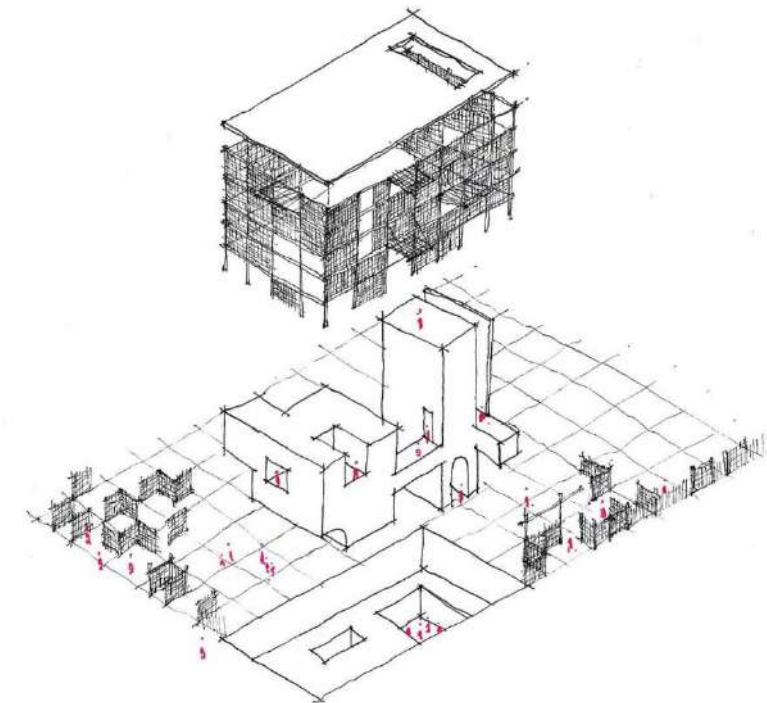# Reconciling the monumental and the everyday

Reconsidering monumentality, memory, and identity in the City of Tshwane's transient urban landscape

Adrian Buffa

Abstract

Monumental space plays an important role in the reification and celebration of history, memory, and identity in the built fabric. A continuum of monumental architecture and spaces within the City of Tshwane represents its complex social, political, and spatial development over time, a dialogue which the current national government seeks to contribute to. However, the most prominent monumental schemes completed in the city, since the advent of democracy, exist as static objects with little relation to history or the needs of the city's current inhabitants. This dissonance between the city's "real" identity, and the identity represented by monumental architecture, has resulted in the development of stagnant edifices which contribute little to the urban environment. In order to realise the potential of monumental architecture to express an inclusive identity, and contribute meaningfully to urban space in the City of Tshwane, the representation of complexity and heterogeneity must be achieved in monumental spaces. A more inclusive form of monumental architecture, which integrates the complexities of history, memory, identity, and everyday urban need, is explored through the reconsideration of monumental form, representation, and user relationships.

Reconciling the monumental and the everyday

Reconsidering monumentality, memory, and identity in the City of Tshwane's transient urban landscape

Lilian Ngoyi Square | Pretoria Central

25°44'47.7"S 28°11'36.2"E

Programming | Workshops, commemorative spaces, and marketplaces

Research field | Memory, Legacy and Identity

Study Leader | Professor Arthur Barker

Keywords | Monumentality, African urbanism, counter-monumentality, temporality

Theoretical premise | The generation of a robust urban architecture which integrates monumentality, memory, history, and everyday urban need using principles of counter-monumentality and flexibility in architecture.
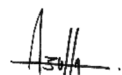
For Romeo Buffa

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

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

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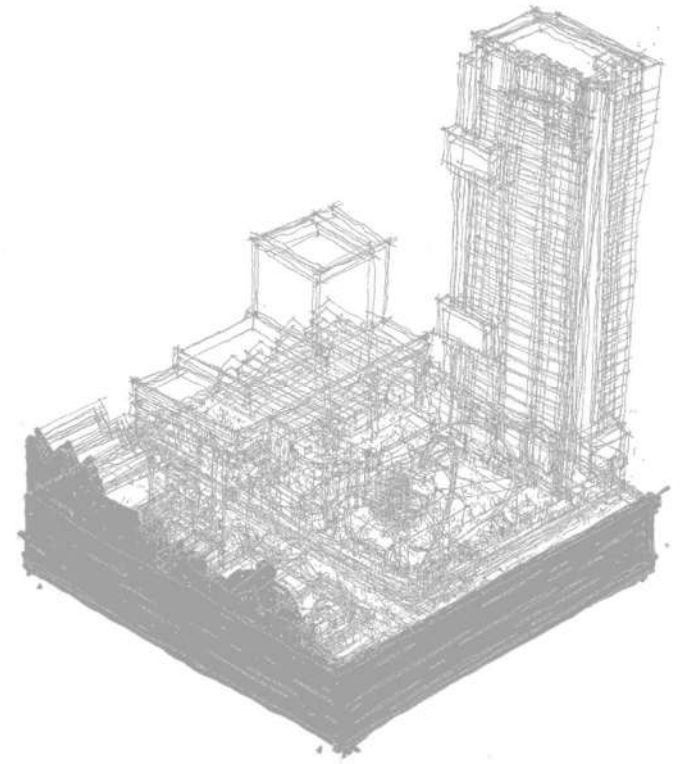
Adrian Giovanni Buffa

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Gabe Vermeulen

Michael and Wendy Buffa

Arthur Barker

Contents

Ethical approval

1| Position and situation

Introduction

The urban structure of the City of Tshwane (CoT) is representative of the spatial impacts of South Africa's historical regime changes and shifting power relations through a continuum of monumental architecture (Clarke & Lourens 2015:40). The current democratic government is eager to contribute to this dialogue, through the construction of new monumental schemes, in the pursuit of a new inclusive identity for the administrative capital of South Africa (City of Tshwane 2015). Despite this lofty ideal, the most prominent attempts fail to engage meaningfully with the complexity of everyday urban experience and urban identity. This necessitates the reconsideration of urban monumental architecture and its role in expressing an inclusive identity which engages with the complexity of the city's urban fabric.

In order to reconsider the articulation of monumentality and its relationship to the everyday, a brief unpacking of these ideas and their manifestation in the CoT will be conducted. An understanding of these conditions will allow the disconnect between the monumental and the everyday to be uncovered, and a suitable site on which to undertake the research to be selected. Following the initial unpacking of issues and opportunities, a theoretical framework will be established based on a literature overview. This framework will inform the development of the methodology which will guide the dissertation.

Monumentality in architecture

Monumental architecture is defined by Horn and Proudfoot (2016:75-77) as a form of architecture which expresses a distinct or imposing presence within space (Figure 1). It is often representative of authority or power, translating political, public, or national values to permanent built form. These expressions have an important role to play in the concretisation of national identity and the creation of tangible connections between past and future (Horn & Proudfoot 2016:75, Young 1992:270). The use of monumental architecture as expression of power and identity is evident in the City of Tshwane, which has played a key administrative role throughout South Africa's development. A continuum of monumental architecture, which displays the dialogue of successive political regimes and developmental paradigms, can be traced within its contemporary urban environment (Clarke & Lourens 2015:40).
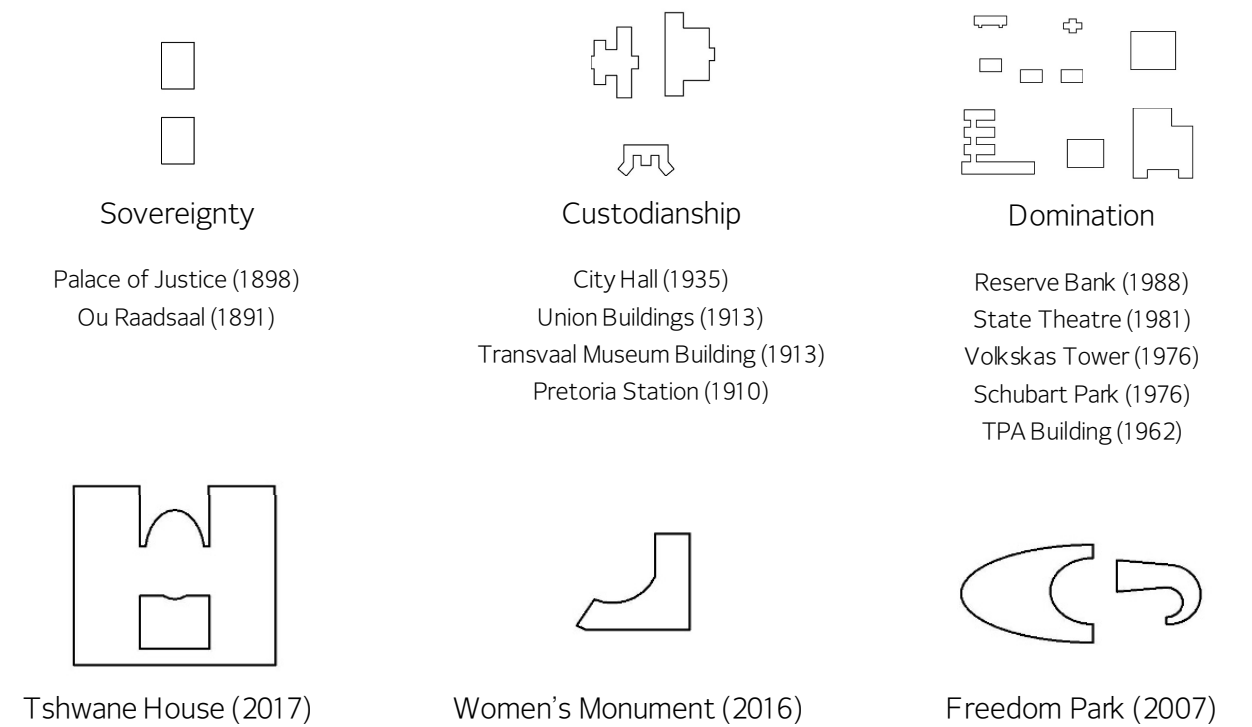

Isolation

Scale

Control

Ideology

Distinction

Stasis
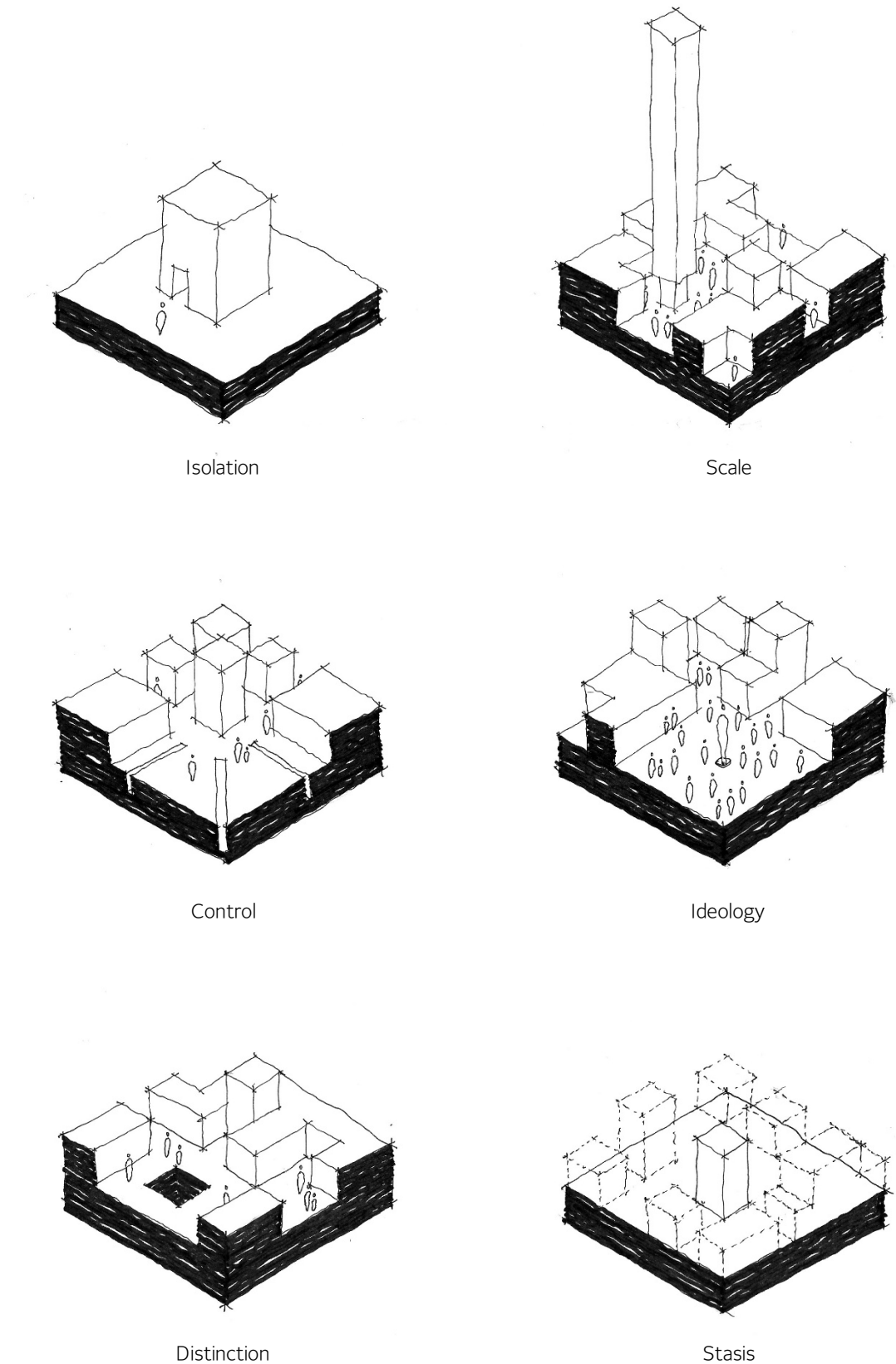
1. Characteristics of the monumental (Author 2021)

The continuum of monumentality in the City of Tshwane

The CoT's monumental dialogue (Figure 2) begins with its establishment as the capital of the newly independent *Zuid Afrikaanse Republiek* (ZAR), or South African Republic, following the migration of Mzilikazi and the Matebele people to the north. Initially named Pretoria, the settlement was set out using a rigid grid, expressing a sense of order within the natural landscape. The origin of this grid was Church Square, a monumental religious and social gathering space for the Boers, which remains prominent in the CoT (Clarke & Corten 2011:882-883, Clarke & Lourens 2015:39, Holm 1998:63, Jordaan 1989). Following the Boers' victory in the First Anglo-Boer War (1880-81), an architectural expression of sovereignty and continued independence was sought within Pretoria. This manifested in the monumental forms of Dutch architect Sytze Weirda (Clarke & Lourens 2015:40-41, Holm 1998:63-64). Following the British victory of the Second Anglo-Boer War (1899-1902), Pretoria was annexed. The Union of South Africa was formed in 1910 and Pretoria became its administrative capital. During this period, several monumental buildings expressed the might of the British Empire and its custodianship of Pretoria and South Africa (Clarke & Corten 2011:884, Clarke & Lourens 2015:41, Holm 1998:57). The advent of apartheid, with the election of the National Party in 1948, led to the eventual formation of the Republic of South Africa in 1961. The resulting monumental architecture of this period is arguably the most prominent in the contemporary CoT, as the apartheid government sought to express their ideals of progress and modernity through the redevelopment of large parts of the city. These schemes came to dominate the city's existing fabric and still exist today as internalised objects, with little contribution to urban space (Brittan & van Wyk 1998, Clarke & Corten, 2011:884, Clarke & Lourens 2015:41).

South Africa's current democratic government, elected in 1994, is eager to contribute to the CoT's monumental dialogue and express an inclusive, progressive identity within the city. (City of Tshwane 2015). Several monumental schemes have been completed recently, including Freedom Park (2007), The Women's Living Heritage Monument (2016), and Tshwane House (2017) (Figure 2) (Clarke & Lourens 2015:42). However, despite the shift towards more inclusive forms of monumental representation in some regards, these buildings remain reluctant to engage meaningfully with urban space and the everyday practices of the city. In response, the reconsideration of monumental architecture to express inclusive identity necessitates an overview of the urban conditions within the CoT.

Sovereignty
Palace of Justice (1898)
Ou Raadsaal (1891)

Custodianship
City Hall (1935)
Union Buildings (1913)
Transvaal Museum Building (1913)
Pretoria Station (1910)

Domination
Reserve Bank (1988)
State Theatre (1981)
Volkskas Tower (1976)
Schubart Park (1976)
TPA Building (1962)

Tshwane House (2017)

Women's Monument (2016)

Freedom Park (2007)

2. The continuum of monumentality in the City of Tshwane (Author 2021)

The everyday in the City of Tshwane

The CoT, like most contemporary South African cities, was shaped by exclusionary spatial policies implemented before and during apartheid. This resulted in the development of a fragmented urban landscape, which excluded black groups from access to socio-economic opportunities provided by cities (Hamann & Horn 2015:39). Post-apartheid policy implementation and attempts at spatial desegregation have fostered a substantial shift in the demographics of the CoT. However, due to a combination of resource misuse, state incompetence, and persistent unequal economic development patterns, access to the city remains a prominent issue for previously excluded groups (Pieterse 2011:5). This highlights the importance of urban space restitution in developing inclusive, equitable cities (Beyers 2013).

In response to previous urban exclusion, emergent urban action has become prominent in the CoT as marginalised groups seek access to the opportunities of the city. This is evident in the transient informal occupation of urban spaces, which provides opportunities not otherwise available to citizens and reshapes the permanent urban landscape (Lawhon, Pierce & Makina 2018, Ribbens & de Beer 2017, Steyn 2019). Informal urban practices, including trade, recycling, worship, education, and settlement, exist as complex networks which coexist with formal urban structures to form a heterogenous urban condition (Dovey 2012). Ultimately, the relationship between transient urban practices and static, or permanent, urban structures forms the conditions of the urban everyday (Figure 3) (Livingstone & Matthews 2017, Van Rensburg & Da Costa 2008:30-31). Pieterse (2011:6-7) argues that transient, emergent urban practices constitute the "real African city", as they accommodate the needs of a large proportion of new urban dwellers. The complexity and heterogeneity of everyday urban experience and production of the "real African city" in the CoT creates an unknowable condition and collection of identities which cannot be distilled or homogenised. Thus, when addressing urban identity and inclusion, it is paramount that heterogeneity, change, and uncertainty are accommodated.
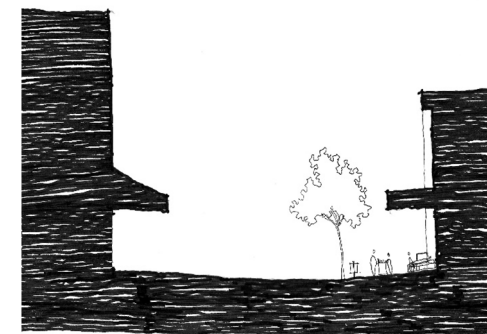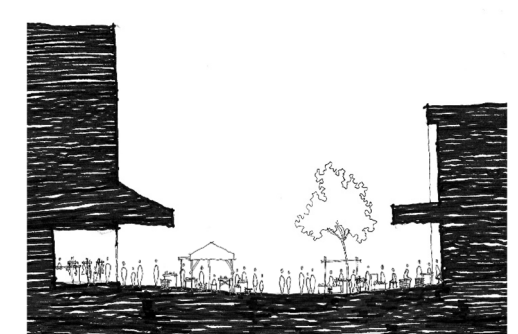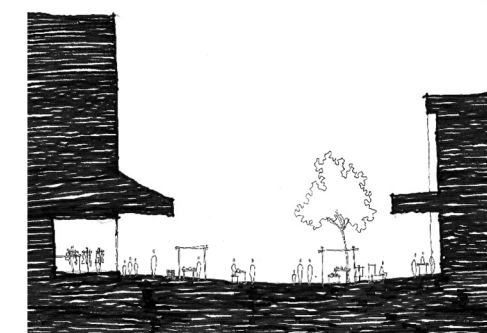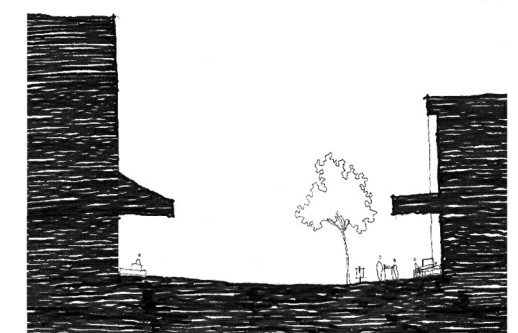

Refuge
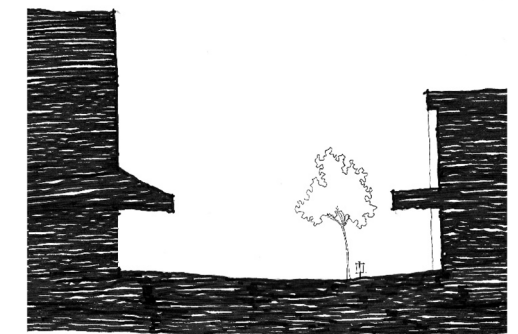
Void
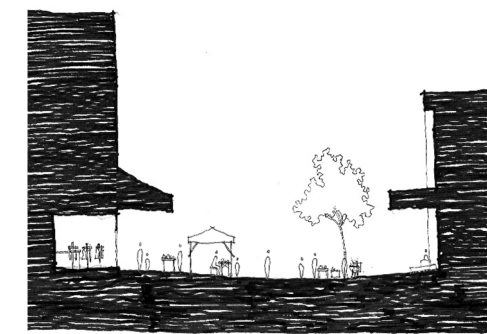
Transport interchange

Market

Social space

Shelter

3. The everyday (Author 2021)

The isolation of the monumental from the everyday

The need to recognise the uncertainty and transience of everyday urban experience in the CoT provides a stark contrast to traditional ideas of monumentality. Conceived as permanent expressions of ideology, identity or memory, monumental spaces are often perceived as features which exist separate from time and change (Horn & Proudfoot 2016:75). The projection of static identity or memory through monumentality exists in tension with the constant change present in urban space. This results in the reification of selective identity and memory in the built environment, which leads to the loss of different spatial understandings and identifications (Bakker & Muller 2010:48-50). This dissonance creates a disconnect between the monumentally represented city and the "real" everyday city (Huyssen 2016:107-108, Sandweiss 2004:25-26, Young 1992:273). The predominantly static articulation of monumental space, separate from urban change, therefore limits its potential to meaningfully enhance urban experience and express a responsive, inclusive identity for the changing city.
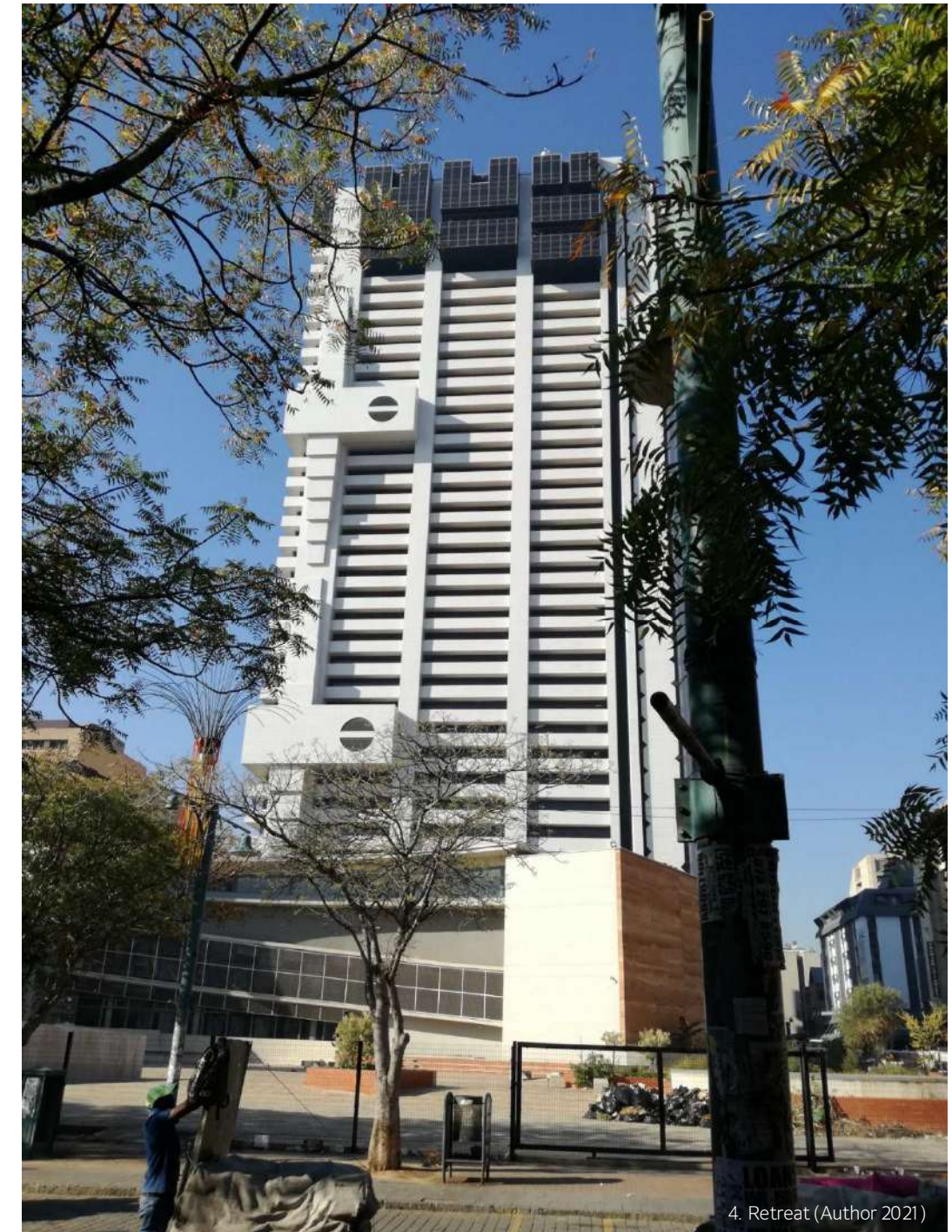
4. Retreat (Author 2021)

Lilian Ngoyi Square

Lilian Ngoyi Square, which is home to the new Women's Living Heritage Monument (2016), is perhaps the most prominent collision of the monumental and the everyday in the CoT. This space exists in dialogue with the ABSA (formerly Volkskas) Tower (1976) and State Theatre (1981) in addition to intense retail, pedestrian, and informal urban activity. However, despite the potential to engage with the urban energy surrounding the site, reconsidering the urban role of monumental space in this precinct, the Women's Monument retreats from the public realm of the street, isolated by a vast public square and impenetrable fence (Figure 4).

The disconnect between Lilian Ngoyi Square and urban experience is further highlighted by its historical development and erasure of meaning (Figure 5). Initially the Pretoria Market Square, the site became home to the Market Hall (c. 1879) which supplemented the square and housed the first museum in the Transvaal. The site's initial role as a place of social interaction and exchange was largely retained over time, developing into a diverse trade district which included an Indian market (Hook 2005:690-691). However, in the 1960s, the market and many of the surrounding trade spaces were demolished to make way for Strijdom Square, a monument to the former Prime Minister whose policies paved the way for apartheid. With the completion of the Volkskas Tower and State Theatre, the entire block was replaced by the sacred precinct of apartheid, a space dedicated to the monumentalisation of Afrikaner culture and domination, the ultimate vision of the apartheid city (Le Roux & Botes 1990:88-89, Rosen in Hook 2005:692).
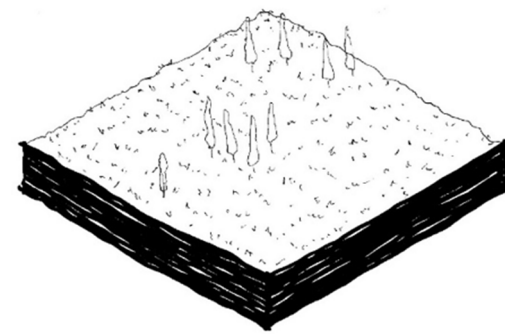
Open space
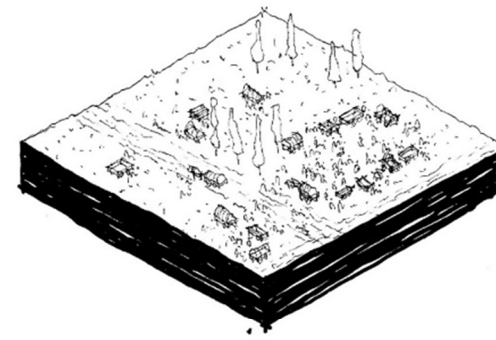
Market Square
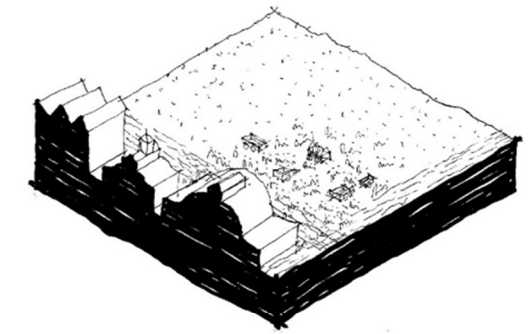
Market Hall (C. 1879)

Trade precinct (C. 1949)

Strijdom Square (1970)

Volkskas Tower (1976)

Sacred precinct of apartheid (1981)

Cupola collapse (2001)

Women's Monument (2016)

5. Historical site development (Author 2021)

The violent, oppressive nature of the erasure and redefinition of the market square culminated in the 1988 massacre by Barend Strydom, who opened fire on black people in and around Strijdom Square, killing 8 and injuring 16 others (Hook 2005:688-690). This was arguably the most visceral and potent event to have occurred on the site,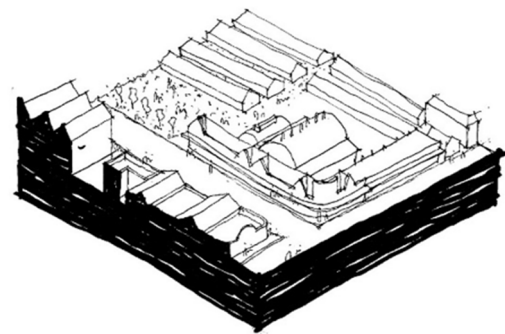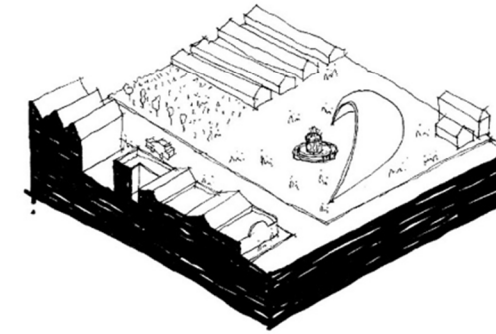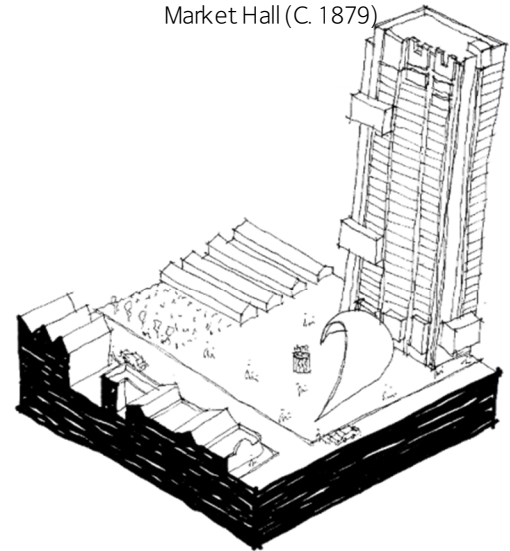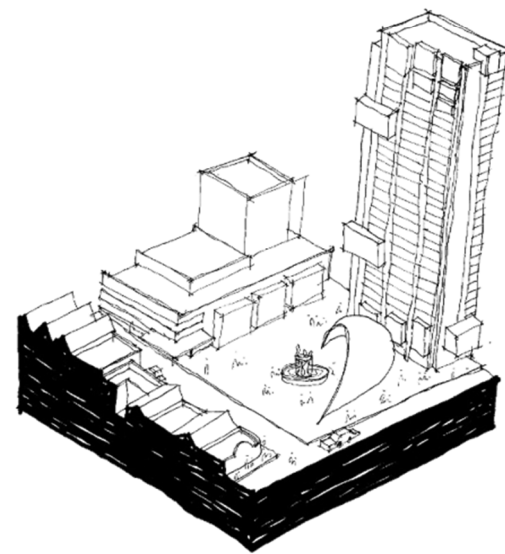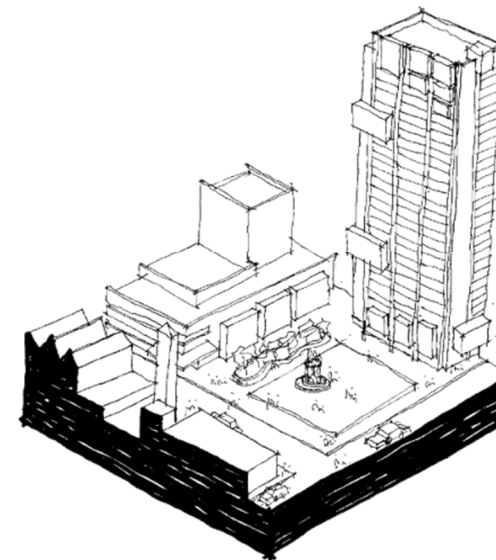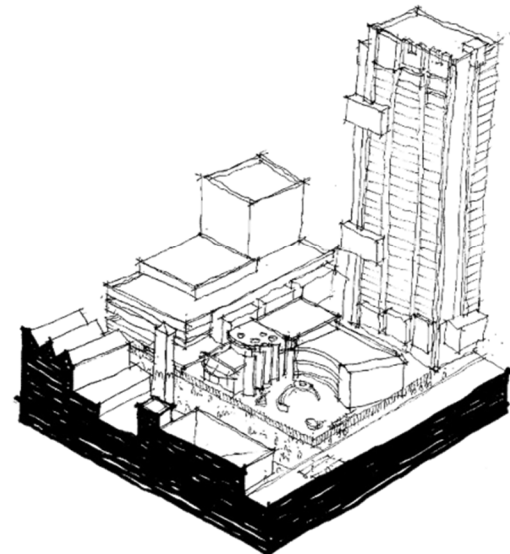 a prominent layer in the site's history of oppression and violence. Despite the complex, contested nature of the site, its current expression of identity is dedicated solely to the Women's (anti-pass) March of 1956, following the transition to democracy and physical collapse of the Strijdom monument. While the re-scripting and renaming of the square in honour of the Women's March does subvert the identity of the space from one of oppression to one of liberation, the reification of the Women's March is problematic. As Sandweiss (2004:26) notes, the projection of isolated memory or identity results in the loss of a space's deeper meaning. In this case, the reification of a single event, which merely passed by the site, has further erased the rich and layered meaning of the space.

The physical and temporal isolation of Lilian Ngoyi Square from the current and past urban context nullifies its ability to express and accommodate the heterogeneity of urban memory, identity, and need present in the space. This reduces its ability to contribute to the desired inclusivity of the city. The site serves as a clear example of the separation between monumental space and everyday urban experience, which makes it ideal to explore these relationships and contest the CoT's existing articulations of urban monumentality.

Monumentality and identity

The reconsideration of monumentality in urban space necessitates an overview of related theories and discourse. A key understanding in this regard is the production of identity in relation to monumental space. To invoke identification in the subject (citizen), effective monumental space creates an aura which unsettles the subject in their relationship to space and time (Hook 2005). The de-temporalisation and re-temporalisation (Bach 2016:49) of identity or memory through monumentalisation results in the disturbance of the implicit natural order between past (which becomes present) and present (which is absent), stimulating an experience of the uncanny. It is within this experience of the uncanny, or ontological dissonance, that identification occurs as the subject attempts to reconcile the presence of past with the absence of the present (the isolation of the monumental from the everyday) (Bach 2016:49-53, Hook 2005). In principle, the production of a monumental (uncanny) aura necessitates distinction and separation from everyday experience, exacerbating the physical and temporal isolation already present in the monumentalisation of static memory and identity. This process is not one-sided, however, as monumental objects and spaces are generally imbued with an implicit presence or subjectivity, relating to their own expression of identity (Hook 2005:696-697, Huyssen 2016:107-108). This establishes a dialogue between the subject (citizen) and the object (monumental space), which results in the inter-subjective construction of identity. Fortunately, the role of the subject in interpreting and reconciling the identity of monumental space provides an opportunity to subvert the traditional subject-object relationships of monumentality.

Reconsidering monumental identity

The theory of counter-monumentality (Young 1992) is a valuable framework within which to reconsider the articulation of traditional monumentality. Where traditional monumental space is separated from the everyday, both physically and temporally, counter monumentality confronts and integrates everyday experience to ensure diverse engagement (Bach 2016:54, Young 1992:272-273). Acknowledging the inability of traditionally defined monumental space to represent heterogenous ideas of memory and identity, counter-monumentality employs the tension between presence and absence to allow a plethora of interpretations and identifications to occur (Bach 2013:31-37). This shifts the defined subjectivity of the monument from specificity to uncertainty. By emphasising the agency of the subject in the interpretation, use, or physical production of monumentality, the authority of the object (monumental) is subverted and the subject is empowered through the projection of their own experience or identity (the everyday) (Bach 2013, Young 1992:274-283). Therefore, the articulation of an inclusive identity through monumentality requires the accommodation of user agency and recognition of urban uncertainty in the production and use of monumental space. This necessitates the reconciliation of the isolating, static conditions of monumentality with the transient conditions of urban change and experience.

Uncertainty and agency in architecture

The interactions between permanent and transient spatial practices in cities have been extensively studied, providing a rich body of literature to draw from. Additionally, the potential of indeterminate spaces and transient uses, in permanent urban frameworks, to accommodate user agency in urban space has been recognised as an important condition to foster citizen-led urban development (Bishop 2015, Corijn & Groth 2005, Henneberry 2017, Hudson 2015). The appropriation of leftover or less regulated urban space shifts the role of urban place-making and expression of identity from urban edifices to urban inhabitants (Henneberry 2017:8, Hudson 2015:462). This understanding provides an opportunity to increase the inclusivity of urban monumental spaces by allowing a degree of flexibility in their physical articulation and representation of identity.

Due to the inherent temporality of urban spatial development and use, the interactions between imposed (monumentalised) and experienced (everyday) temporalities must be spatially integrated in order to create robust, flexible architecture (Hudson 2015). The emerging theory of critical temporality (Bastian 2014, Livingston & Matthews 2017) provides a lens through which this can be explored. In addition, the translation of temporality to architecture may be guided by architectural theory which deals with non-linear development cycles, event architecture, and user agency (Awan, Schneider & Till 2011, Habraken 2008, Kendall 2017, Noero 2016, Tschumi 1991). The exploration of flexible urban architecture and its interaction with monumental space may elucidate the possibilities of an inclusive urban monumentality in the CoT.

Architectural intentions

In addition to its rich, layered (but largely erased) identity, Lilian Ngoyi Square inhabits a prominent position along the planned Ceremonial Boulevard (Figure 6), a development corridor dedicated to the accommodation of festivals, parades, protests, processions, and other civic or celebratory events (City of Tshwane 2015). Additionally, it serves as a threshold into the proposed Civic Precinct, which encompasses spaces celebrating art and culture, political engagement, activism, and tourism (City of Tshwane 2015). In the larger framework of the city, the site has the potential to link the "heart of the city" around Church Square with the Union Buildings, the seat of national government. As a space which mediates multiple urban, social, and political relationships, Lilian Ngoyi Square is ideally situated to become a space of integration in the city (Figure 7). The intention to reconcile monumental space with everyday urban inhabitation at Lilian Ngoyi Square necessitates the generation of a robust monumental architecture which accommodates and integrates celebration, history, loss, and the temporality of everyday urban need to facilitate the expression of inclusive identity. As such, the intervention must respond to the needs of existing everyday practices and inhabitants, the site's history, and its role within the civic precinct and along the ceremonial boulevard. Additionally, programming should be flexible and facilitate user agency to counter the site's current static spatial articulation and imposition of singular identity.

Methodology

In order to address the general, urban, and architectural issues, the dissertation will consist mainly of an interpretivist desktop study. Initial site analysis and interpretation will be conducted through on-site observation and study of historical and contemporary mapping data related to the site. Historical documents in the Department of Architecture's archives will be consulted to assist in this regard. Ethnographic information relating to urban inhabitation and practices in the CoT will be acquired through secondary data analysis and applied to the specific context. Following this, analysis of architectural theory relating to monumentality, counter-monumentality, and spatial flexibility will be undertaken. As the core of the dissertation is the testing and reconsideration of existing architectural theory, analysis of relevant precedent is key to extract architectural principles from theoretical postulations. This method has been successfully used in similar studies (Awan, *et al* 2011, Bishop 2015, Noero 2016, Young 1992) which will be used as guidelines. Principles extracted from precedents will be applied in context, through speculative drawings and model making, to develop a conceptual framework. The exploration of an architectural intervention, in context, guided by the conceptual framework will form the primary means of architectural investigation. The design process will culminate in a design proposal, including technical investigations, exploring a monumental architecture which reconciles monumental space with everyday urban inhabitation at Lilian Ngoyi Square.
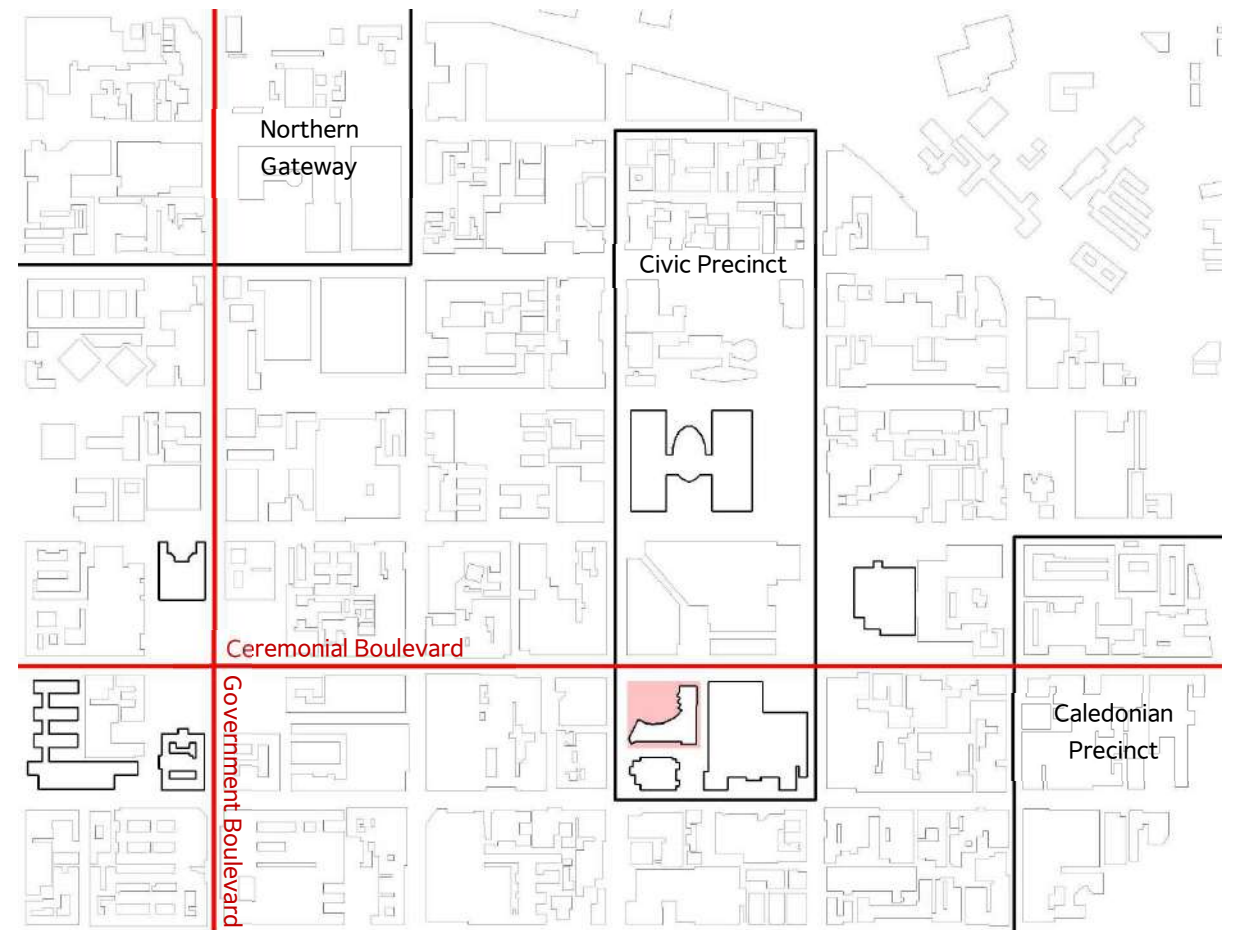
6. Focus area (Author 2021)
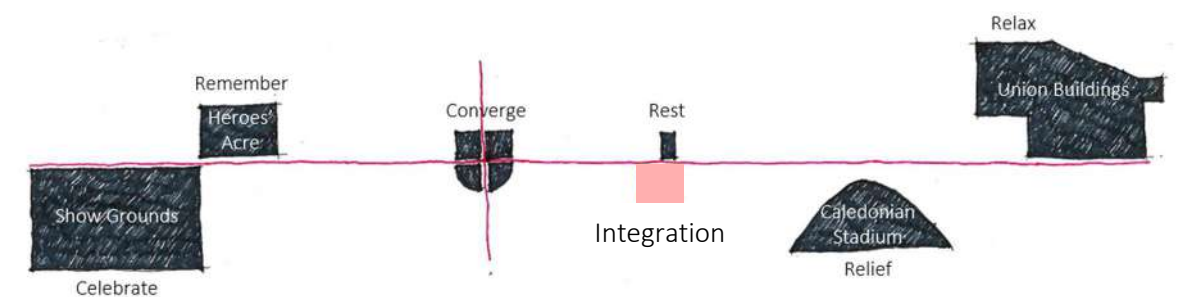
7. Urban meaning of site (Author 2021)

In order to focus the investigation, the dissertation must be delimited. To this end, primary data relating to everyday urban practices in the CoT will not be collected. Secondary data and theory analysis will be used instead, as in-depth ethnographic information concerning the site's inhabitants cannot realistically be collected in a short time. This will allow more time for in-depth architectural investigation. Additionally, as the main intention of the dissertation is the proposal of a reconsidered approach to new monumental interventions in the CoT, appropriation or reuse of existing monumental buildings will not be explored. Therefore, proposed interventions will occur largely in the unbuilt spaces of Lilian Ngoyi Square. Additionally, the Women's Living Heritage Monument will be retained in its current form, with minor interventions where appropriate. It is important to note that the current inaccessibility of Lilian Ngoyi Square and the Women's Monument is a major limitation. In response, information that can be obtained through observation from the street, publicly available aerial photographs, and design or working drawings of the intervention will be used for analysis of the site's existing conditions.

As no human participants or physical experimentation will be required to complete the dissertation, ethical concerns are limited. It will be ensured that all secondary data consulted is ethically acquired and properly referenced. Furthermore, the research will be conducted as per the ethical guidelines set out by the University of Pretoria (University of Pretoria 2012).

Conclusion

The desire of the current local government to express a new inclusive identity for the CoT, through monumental architecture, is a vital step in ensuring urban space restitution. It is, however, important that these expressions of monumentality engage with the complex temporal conditions of the city to accommodate a wide range of needs and identities, a characteristic which has not been realised by recent attempts such as the Women's Living Heritage Monument at Lilian Ngoyi Square. This necessitates the reconsideration of the autonomy of monumental architecture, to empower citizens in shaping the current and future identity of the city and its architecture. An investigation of monumentality, counter-monumentality, and flexibility in architecture will be conducted. This will allow the exploration of a monumental architecture which engages with everyday urban experience and facilitates user agency in the pursuit of an inclusive spatial identity for the CoT.

2 | Design research

Introduction

Reconsidering the role of urban monumental architecture in expressing an inclusive identity for the City of Tshwane (CoT) requires the reconciliation of the static, didactic conditions of traditional monumentality with the transient and uncertain nature of everyday urban inhabitation and memory. This necessitates the accommodation of user agency and recognition of heterogeneity in the production and use of monumental space. By emphasising the role of the individual in generating spatial meaning and identity, the autonomy of the monumental edifice may be subverted in favour of the user.

In order to focus the design investigation, the intervention's physical context and relation to a continuum of design thinking must be understood. To this end, a study of context and precedent will be conducted. First, site analysis concerning urban conditions, history and heritage, and the Women's Living Heritage Monument will elucidate the key issues and opportunities to be addressed. This will help to generate the scheme's programming and initial spatial responses. Following this, precedent studies of counter-monumentality and flexibility in architecture will be undertaken to determine the core architectural principles which will guide the scheme. The informants and principles determined through these investigations will lead to the generation of a refined concept to guide design development.

8. Context (Author 2021)
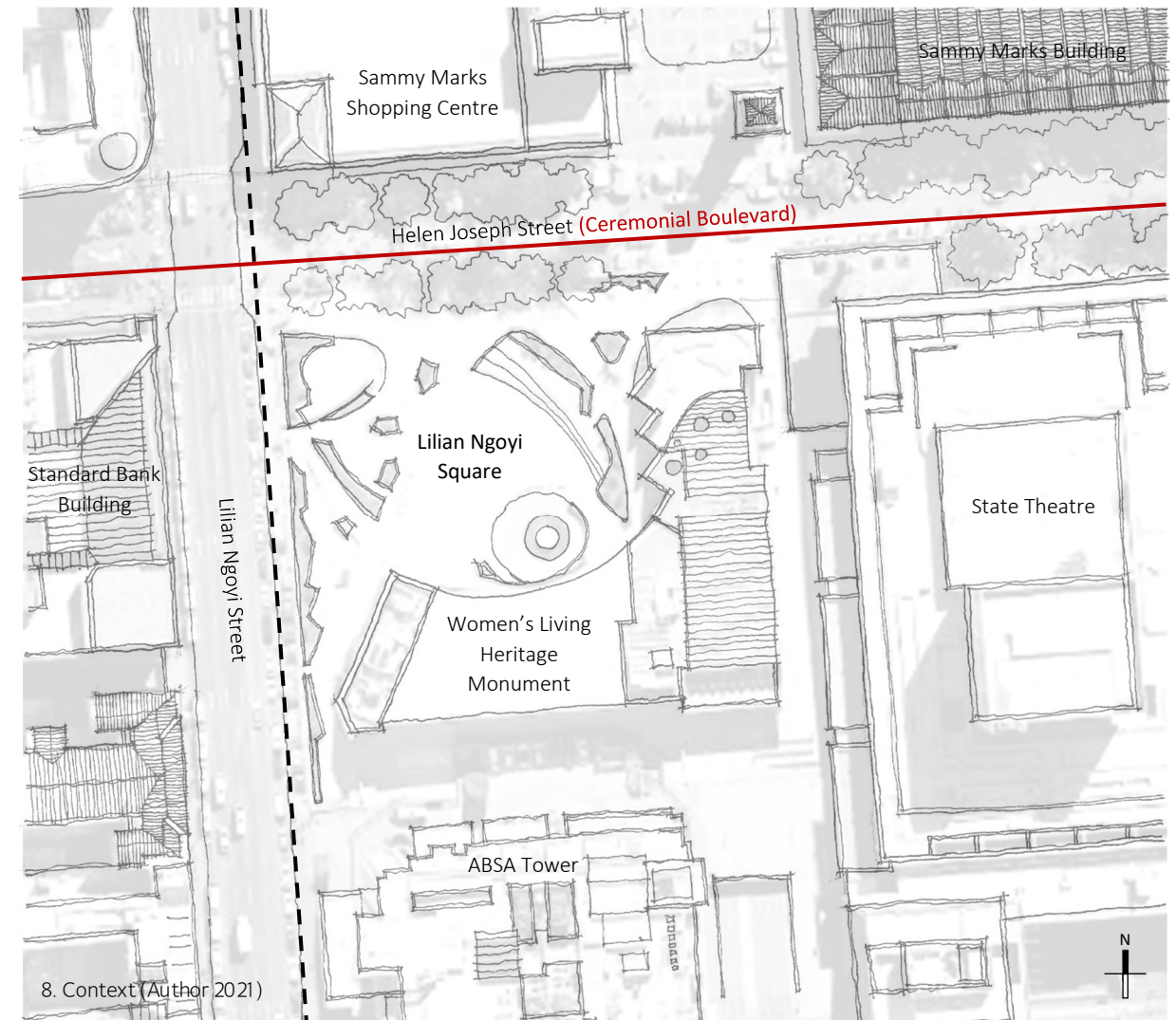
Urban conditions

Lilian Ngoyi Square is located along the city's planned Ceremonial Boulevard, Helen Joseph Street, and is part of the future Civic Precinct (Figure 8). Additionally, it is positioned between the core of the city at Church Square and the seat of national government at the Union Buildings (City of Tshwane 2015). The surrounding context consists largely of commercial buildings (Figure 9), including the ABSA Tower (1976) and Standard Bank building. The neighbouring State Theatre (1981) is a cultural hub in the city, accommodating a variety of performance functions. Sammy Marks Square Shopping Mall (1993) to the north is a bustling trade space, which houses numerous retail outlets, a library, and offices. In addition to the formal retail and commercial activity surrounding the site, the western and northern edges accommodate intense pedestrian traffic and informal trade (Figure 10). While the northern edge acts as a continuation of the Church Street market to the west (Figures 12 & 13), activity declines sharply after Sammy Marks Square. In contrast, most of the site's western boundary is inhabited by informal trade stalls and pedestrians, making this an important edge to address. Within the larger urban condition, the site plays an important role as a threshold into the Civic Precinct and mediates the cultural functions of the Women's Living Heritage Monument (2016) and State Theatre with the surrounding commercial and retail conditions (Figure 15). This positions the site as a vibrant space of economic, social, and cultural exchange within the city.

Despite the intensity of pedestrian activity in the precinct, accessible public space is scarce (Figure 11). Although the large square in front of the Women's Living Heritage Monument is a grand gesture towards accommodation of the public in monumental urban space, it is poorly articulated (Figure 14). The lack of definition along its western edge leaves the square exposed to the busy road and disregards the existing informal activity which inhabits the space (Figure 16). Furthermore, the articulation of the square does not provide enclosure or intimacy to counter the dominating presence of the Absa Tower and surrounding monumental buildings, or provide respite from the harsh sun (Figure 17). Despite the new narrative and identity attached to the site, its spatial character remains remarkably similar to that of Strijdom Square (1970), a contentious space which generated public outcry in response to its inhumaneness. Regardless of the suitability of the public space, it is currently fenced off and is inaccessible to the public (Figure 18). In response to current site conditions, a more appropriate and robust articulation of public space at Lilian Ngoyi Square must be explored. This requires engagement with the existing activity along the site's edge(s), mediation of cultural, economic, and celebratory functions, as well as the creation of enclosure and intimacy within the public square.

9. massing and programming (Author 2021)

Massing and programming
(NTS)
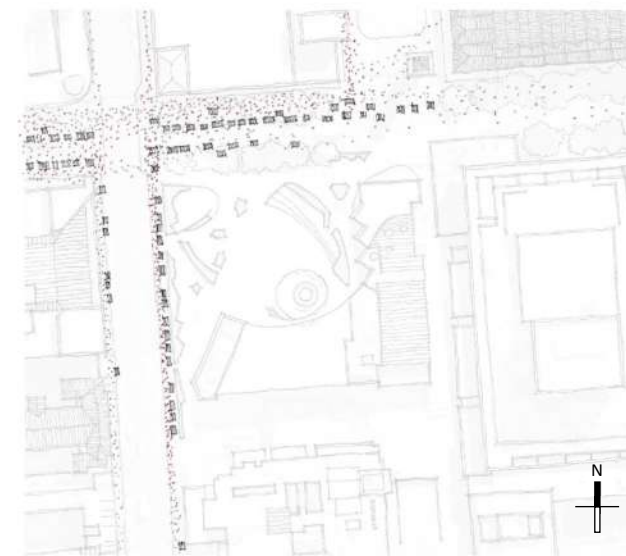
10. Pedestrian and informal trade activity (Author 2021)

Informal trade and pedestrian activity
(NTS)

   Pedestrian activity

   Trader stall
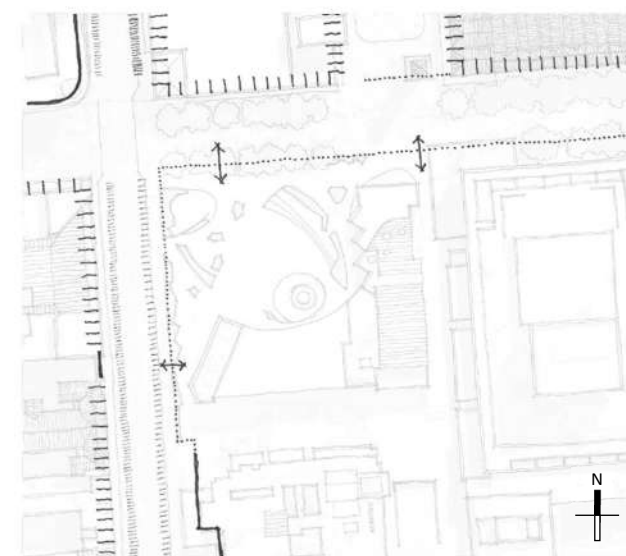
11. Boundaries and edge conditions (Author 2021)

Boundaries and edge conditions
(NTS)

   Impermeable edge

   Visual permeability

   Retail edge

   Meter taxis

   Minibus taxis

   Locked pedestrian entrance

12. Extension of Church Street Market (Author 2021)

13. Informal retail in front of Sammy Marks Square (Author 2021)

Impermeable edge

Visual permeability

Permeable edge

Public space

Semi-public space

Private space

W-E Section (NTS)

Standard Bank Building

Lilian Ngoyi Street

Lilian Ngoyi Square

Women's Living Heritage Monument

State Theatre

Edges

Activity intensity

Spatial grading

N-S Elevation (NTS)

State Theatre

Sammy Marks Square

Helen Joseph Street (Ceremonial Boulevard)

Women's Living Heritage Monument

Lilian Ngoyi Square

ABSA Tower

Edges

Activity intensity

Spatial grading

14. Spatial analysis of site (Author 2021)

Part 2

33

34

Design research

15. Threshold (Author 2021)
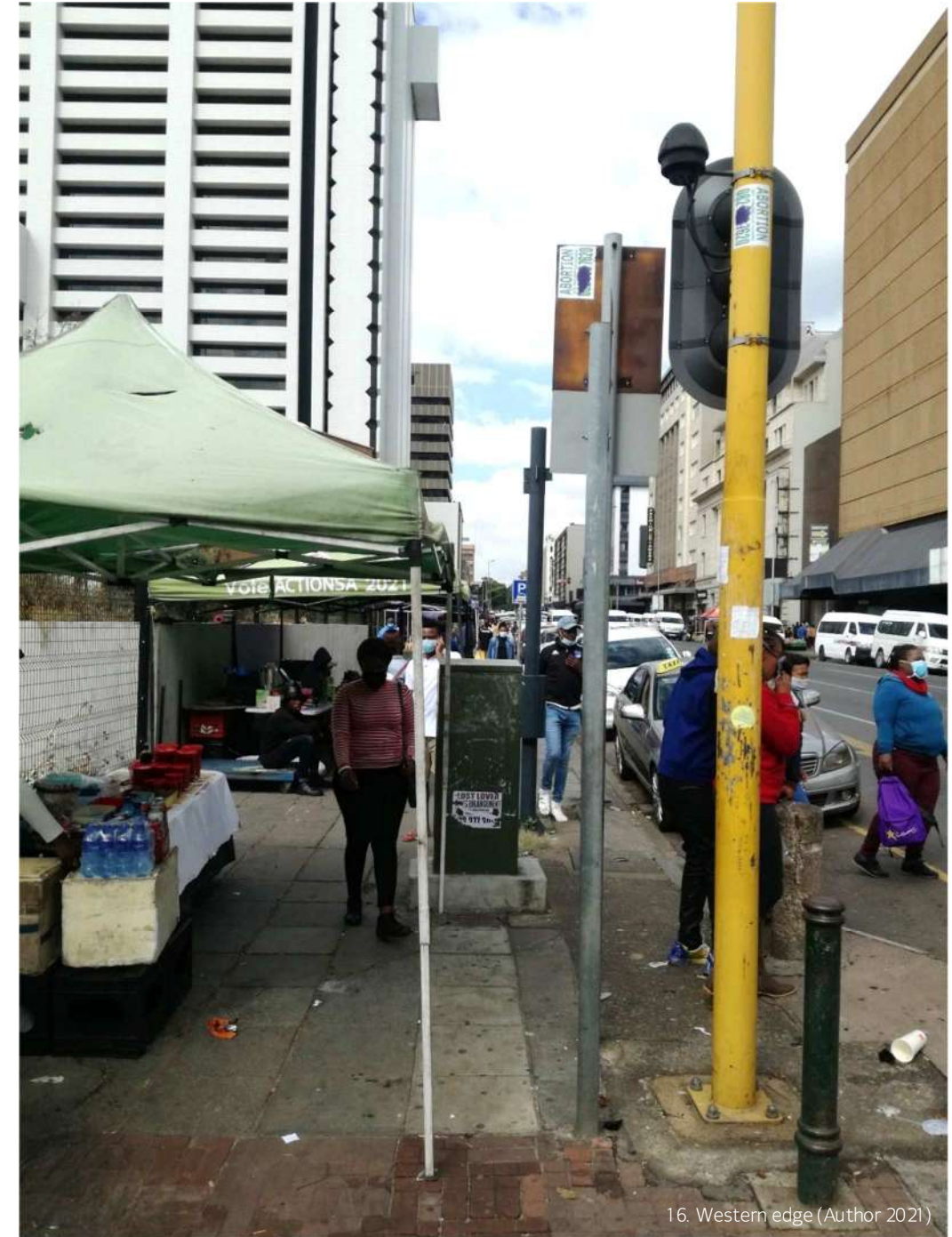
16. Western edge (Author 2021)

Summer solstice	Autumnal / Vernal equinox	Winter solstice
06:00	06:00	06:00
09:00	09:00	09:00
12:00	12:00	12:00
15:00	15:00	15:00
18:00	18:00	18:00
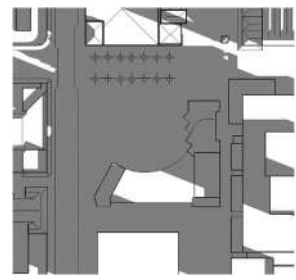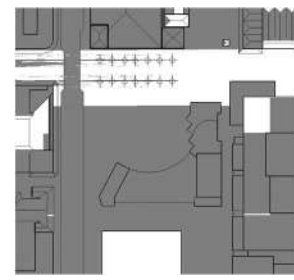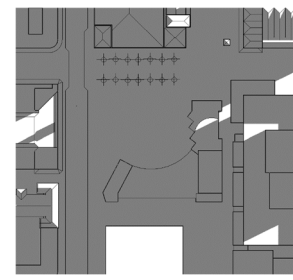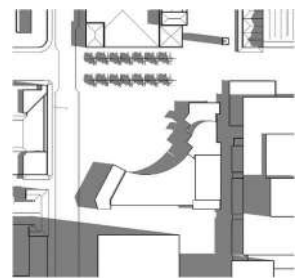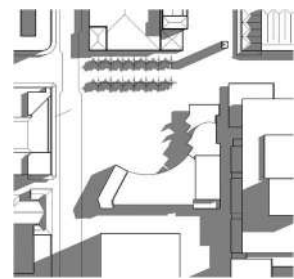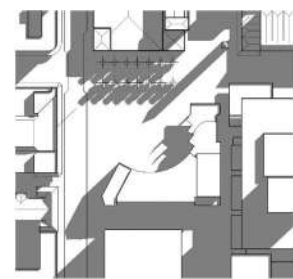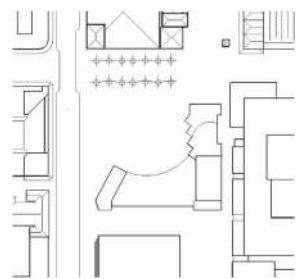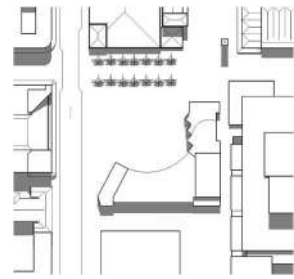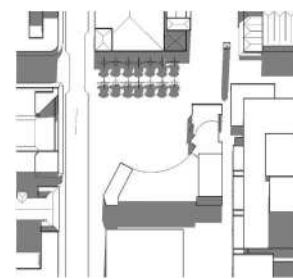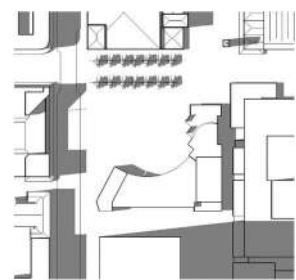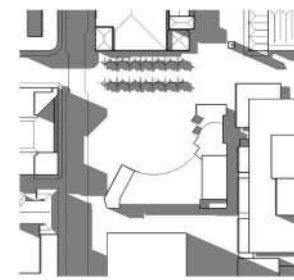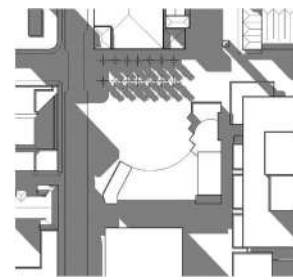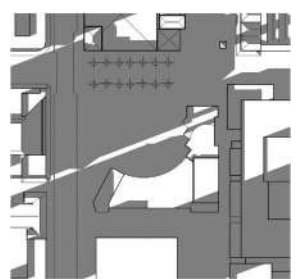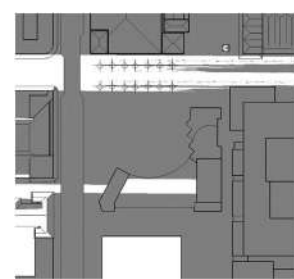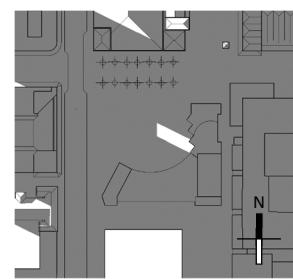
17. Solar study (Author 2021)

18. Isolation (Author 2021)

Site history

Throughout its development, Lilian Ngoyi Square has served the CoT in different ways. Initially a space of cultural and economic exchange, until the construction of Strijdom Square (1970), this function has been partially reintroduced through the informal trade present around the site (Hook 2005:703). However, much of the site's history remains inaccessible, obscured by multiple redevelopments and impositions. The dominant event recognised on site today is the 1956 Women's March. Although this was a prominent event in South Africa's history, the March began at Church Square and culminated at the Union Buildings, merely passing by what was then a trade and market space. The rewriting of the square's meaning as a space dedicated solely to this event is questionable given the site's rich history. While some references to the Strijdom Monument's fountain and cupola remain, the Wit Wolf Massacre and collapse of the Strijdom bust, along with a large portion of the square's surface, have not been formally recognised. Barend Strydom's 1988 racially motivated attack, which left 8 people dead, serves as a potent reminder of the violence and hatred bred by apartheid. The collapse of the Strijdom monument, in contrast, represented the end of apartheid and symbolised release from its oppressive systems (Hook 2005). Despite the prominence of these events in the history of South Africa and Lilian Ngoyi Square, they remain unrecorded in the latest iteration of the space. This necessitates the representation of lost history, within everyday urban space, to accommodate a multiplicity of memory and meaning in Lilian Ngoyi Square (Figure 19).

Market Hall footprint (C. 1879)

Retail edge (C. 1949-1960)

Strijdom Square fountain (1970)

Wit Wolf Massacre (1988)

Strijdom Square collapse (2001)

Overlay
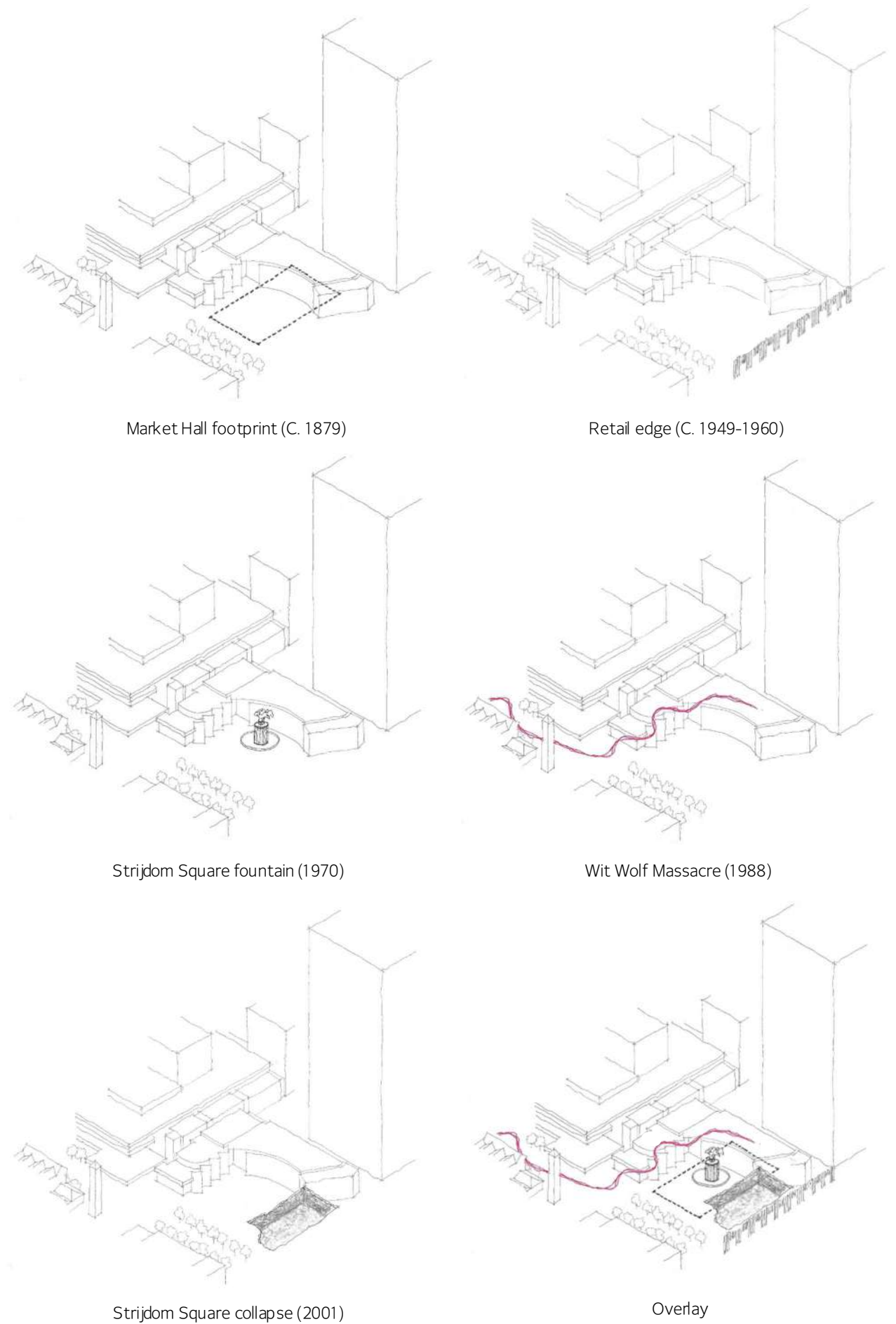
19. Prominent heritage on site (Author 2021)

The Women's Living Heritage Monument

The design of the Women's Living Heritage Monument (Figures 20 & 21) further exacerbates the site's lack of engagement with everyday urban activity and complex history. The monument consists mainly of a museum, restaurant, shop, gallery space, and offices for women's organisations. Interestingly, it houses a multifunctional hall and a modest computer training space. However, despite the potential of these spaces to contribute to the city as public amenities, they remain internalised and strictly controlled. This is a missed opportunity given the immense entrepreneurial and skill development potential provided by informal business owners and traders, especially in the context of increased emphasis on small and medium enterprise development in South Africa. The architectural language of the monument is relatively neutral, consisting mainly of off-shutter concrete and painted plaster walls. The building distinguishes itself from the predominantly brutalism of the neighbouring State Theatre and Standard Bank buildings through the introduction of some organic geometry and large rammed earth walls. Ultimately, most of the building exists separate from the city and its opportunities, with a single entrance to the museum and minimal accommodation of urban inhabitants along its predominantly hard edges. This results in a potentially beneficial space remaining exclusive within the urban environment, a further separation of the monumental from the everyday.

20. The Women's Living Heritage Monument in context (Lukheli 2018)

1. Public ablutions
2. Storage
3. Exhibition space
4. Multi-purpose hall
5. Staff facilities
6. Shop
7. Restaurant
8. Museum Ramp
9. Main Display
10. Offices
11. Museum Ramp
12. Gallery
13. Roof Terrace
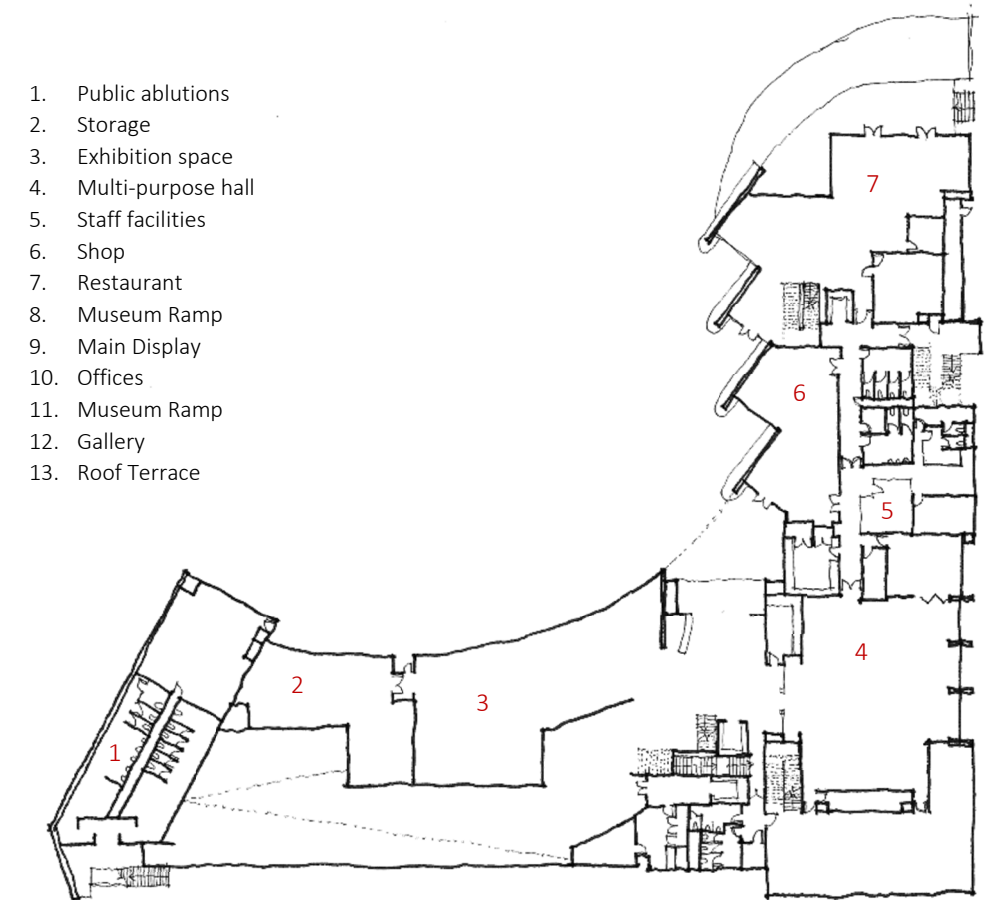
Ground floor plan (NTS)
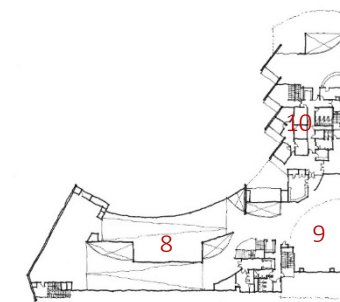
First floor plan (NTS)
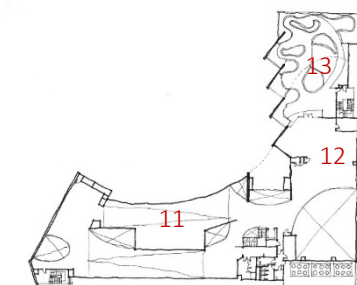
Second floor plan (NTS)
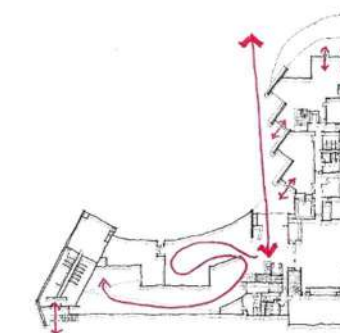
Ground floor plan circulation (NTS)

Public space
Semi-public space
Private space
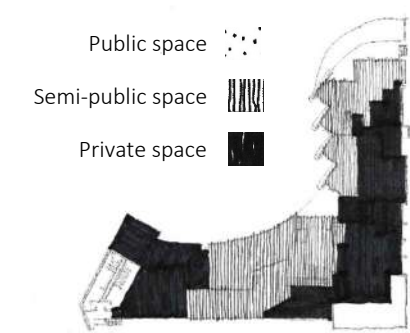
Ground floor plan accessibility (NTS)

21. Women's Living Heritage Monument analysis (Author 2021, adapted from original plans)

Living heritage

The designation of the Women's Monument as a space of 'living heritage' suggests a progressive understanding of what a monumental space could be in the transient urban and cultural landscape of the CoT. Living, or intangible, heritage refers to knowledge, practices, skills, and expressions passed down through generations. However, as argued by Bakker and Muller (2010), the current government's hegemonic use of static monuments and simplistic narratives to represent intangible heritage displaces the potential recognition of complex, contradictory narratives and meanings associated with spaces. The Women's Living Heritage Monument is dedicated predominantly to the exhibition of a set narrative of women's contributions to South Africa's liberation and overt references to specific heroic figures of the Women's March, which severely restricts its potential to accommodate the multiple meanings and diverse identifications which make up the site's intangible heritage. Despite its name, the static imposition of meaning by the Women's Living Heritage Monument nullifies its potential to recognise and accommodate the complexity of its urban context and intangible heritage. Instead of rescripting their meaning to conform to an imposed narrative, spaces which deal with complex intangible heritage should be open-ended, allowing continuous production and interpretation of meaning by inhabitants (Bakker & Muller 2010:54). This further emphasises the potential role of individual agency and identification in the production of inclusive monumental space.

General response to context

Analysis of Lilian Ngoyi Square and the Women's Living Heritage Monument highlights the disconnect between these monumental spaces and the everyday urban realm they inhabit. Their lack of engagement with existing activities surrounding the site, and the poor definition of the "public" square limit its ability to contribute meaningfully to the everyday needs of urban inhabitants. This creates a spatial disconnect between Lilian Ngoyi Square and the urban practices it should accommodate as a space of economic, social, and cultural exchange. Furthermore, the static nature of the Women's Living Heritage Monument and its imposed narrative override the site's layered history of exchange, loss, oppression, death, and liberation.

This nullifies its ability to represent an inclusive identity within the complex urban landscape of the CoT. Therefore, the new intervention on site should accommodate and enhance the existing and potential future urban practices present, through the provision of infrastructure and amenities, and provide spatial representation of the site's complex intangible heritage and meaning. Additionally, in order to counter the exclusive, reductionist identity imposed by the Women's Living Heritage Monument, the programming of the new intervention must embrace complexity and diversity in need, use, and identity.

Programming

A number of contextual informants will be used to generate an appropriate programmatic response which celebrates inclusive identity and provides a meaningful urban contribution to the city (Figure 22). The scheme's core programming deals with the integration of the creative potential of the civic precinct and surrounding cultural spaces with the entrepreneurial and commercial energy which exists around the site, while celebrating the contributions of everyday urban inhabitants to the production of the CoT's identity.

Craft, as a process which intertwines the expression of identity with social, cultural, and economic production (Costin 2008) is used as a basis for this integration. The process of making may serve as an expression of individual or collective intangible heritage, providing economic and social opportunities while generating new meaning in and around the site, in dialogue with its existing heritage and urban characteristics. The primary programmatic provision of the scheme is, therefore, a number of workshop spaces which allow craft and making at different scales and in different conditions. The prominence of formal and informal clothing and accessory retail around the site highlights the potential of textile production to provide links between existing practices and workshop spaces. This presents opportunities to explore processes including weaving, sewing, knitting, and beadwork using a variety of materials. Furthermore, these activities could link to the state theatre and the Women's Living Heritage Monument (Figure 18), allowing exchange of goods, skills, and identity throughout the wider context.

In addition to the workshop spaces, the intervention will provide support for traders through individual stalls, open market spaces, and storage facilities. A satellite trade permit office will provide services to traders who require permits or administrative assistance, with seminar and meeting spaces provided on site for the required trade permit course. These spaces will link to the workshops to encourage skills development and sharing, and accommodate business support services for makers, traders, small business owners, and women's organisations housed in the Women's Living Heritage Monument. Finally, a number of public gathering spaces will be provided in the intervention and Lilian Ngoyi Square to accommodate protests, demonstrations, performances, and other events along the Ceremonial Boulevard.

Ultimately, by accommodating and celebrating everyday urban actors and their contributions to the identity of the city through making, exchange, and social interaction, the intervention augments the site's narrative with the representation of everyday urban makers (of goods, space, identity, and history) alongside heroic exemplars and political figures – a reconciliation of the monumental and the everyday.

Opportunities and informants	Core programming	Key contextual links

Public infrastructure

Market space
Trader stalls
Public gathering spaces
Public ablutions (existing)
Memorial and commemorative spaces

Women's Living Heritage Monument
Celebration of women's past and
current contributions to South Africa

Commercial precinct
Formal and informal retail

Civic Precinct
Tourism
Art and culture
Performance

State theatre
Costumes
Props
Posters

Formal retail
Clothing
Accessories
Furniture
Repairs

Workshops

Fabric and textile weaving
Sewing
Beadwork
Wire weaving
Skill sharing

Site history
Economic and cultural exchange,
Monumentality
Celebration

Informal Retail
Clothing
Accessories
Repairs
Shading devices
Storage and display devices
Skills development

Ceremonial Boulevard
Celebration
Event

Women's Monument
Gift shop curios
Exhibitions
Courses for women

Critique of monumentality
Reconsidering monumental space as
public infrastructure to celebrate
citizens' contributions to the urban fabric

Support spaces

Trade permit office
Meeting rooms
Seminar spaces
Event spaces

22. Programmatic informants and interactions (Author 2021)

Temporality and change

In addition to fixed, defined programming, the uncertainty and temporality of urban inhabitation in the CoT must be acknowledged and accommodated. The theory of critical temporality (Bastian 2014, Livingston & Matthews 2017) provides a framework with which to address this issue by understanding the different scales of time and change within the urban environment. By unpacking the potential intensity of urban activities around the site over time, spaces can be designed to accommodate different functions at different times, ensuring continued relevance and public provision as opposed to stagnation in times of disuse. This provides another layer of complexity and flexibility to the architecture (Figure 23), which is paramount to address the reconciliation of transient urban practices with static monumental edifices.

Morning	Afternoon	Evening	Night

Permit office

Administration

Trade permit / short courses — Informal gathering — Night classes

Seminar space

Meeting rooms

Internal meetings and discussions — Homework — Studying — Studying and meetings

Trader stalls

Retail and social interaction — Storage and display of goods, public seating

Market space

Public gathering — Afternoon market — Night market — Storage

Textile workshop

Textile production and training

Communal workshop

Skill sharing — Public courses — Textile workshop support

23. Programmatic temporality (Author 2021)

Initial concept

Following the identification of the general requirements of context and programming, initial spatial explorations were undertaken. These were completed in context, informed largely by the geometries and massing of the urban environment, the Women's Living Heritage Monument, locations of prominent historical events and structures, and the structural grid of the existing basement parking garages below the site. The resulting diagrams (Fig. 25) represent explorations of massing, edge definition, site access, and response to the Women's Monument. Following this initial exercise, a series of maquettes (Figure 26) were built in context in order to test the three-dimensional implications of interventions in the space. In addition to contextual grids, the maquettes responded to the scale of surrounding buildings and the square. This exercise culminated in the generation of a conceptual axonometric diagram (Figure 24). This concept represents an exploration of static monumental form as an inhabited object, mediated by a manipulable external skin or veil. Despite its potential to visually represent a changing condition, the concept's form and scale limits its potential to engage meaningfully with the pedestrian and urban activity on ground level. Furthermore, it fails to respond to the site's history and need for public space to enhance existing urban activities. Upon reflection, it is clear that the concept largely recreates the existing dominating, isolated articulation of existing monumental architecture in the CoT. Furthermore, its articulation undermines Lilian Ngoyi Square, instead of enhancing this important public space. This exploration highlighted the need for an understanding of different approaches to creating monumental space and form in the public realm, and a more holistic approach to integrate all design informants and ensure an appropriate architectural response.
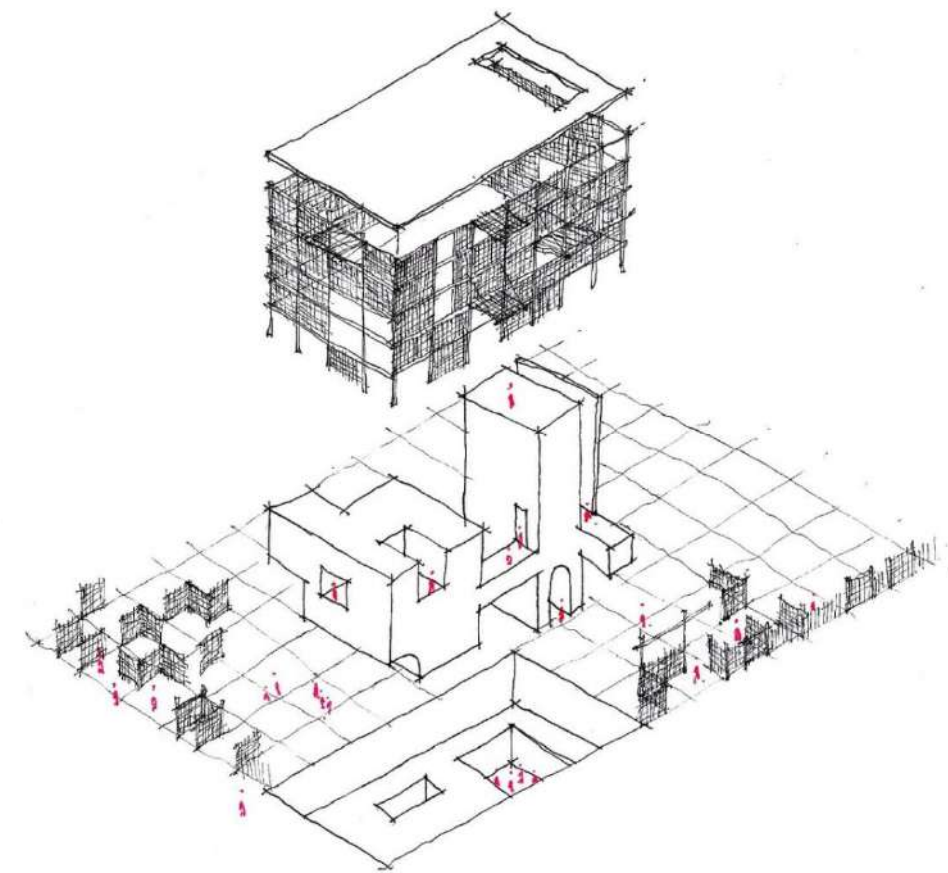
24. Veiled Monument Concept (Author 2021)
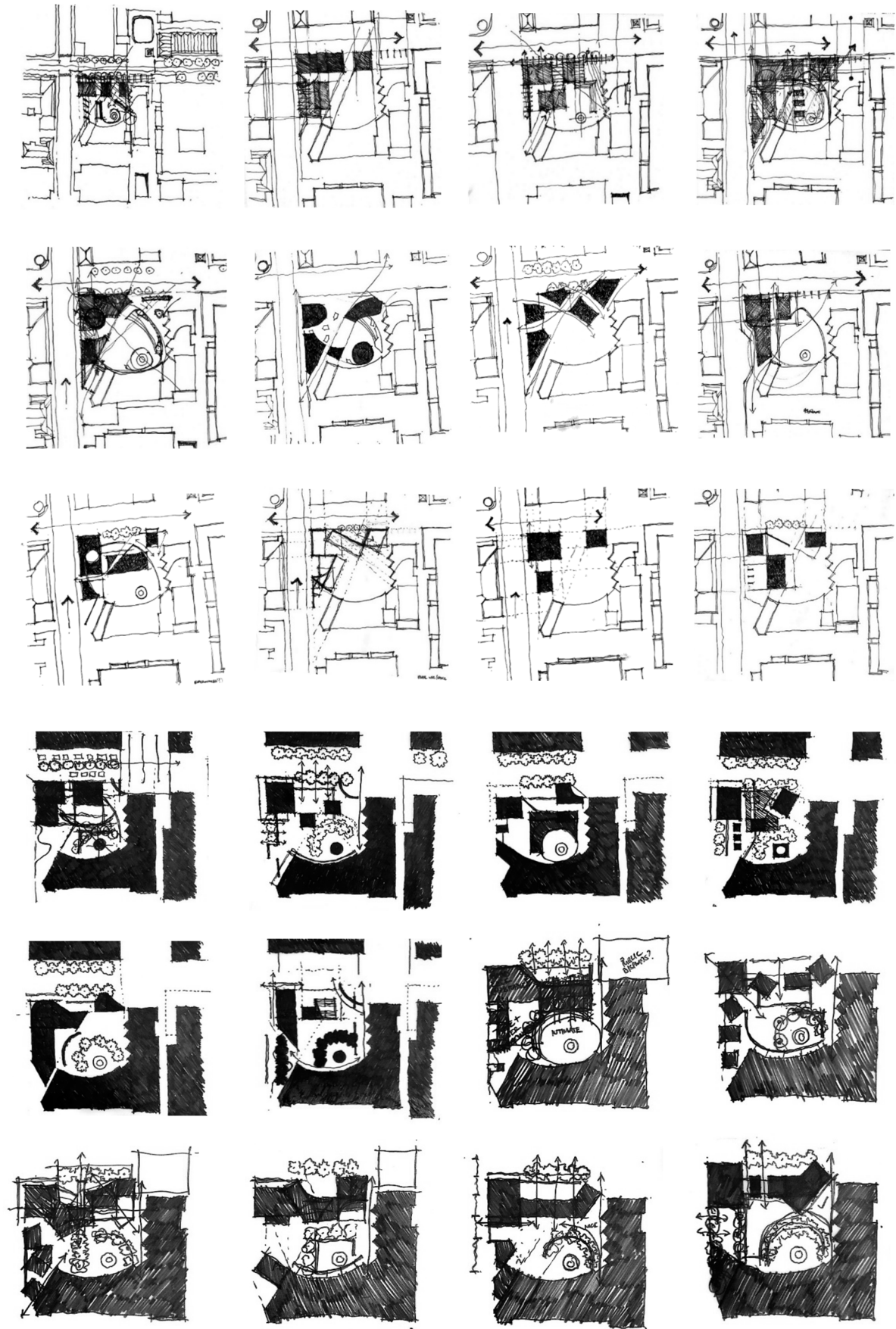
25. Initial site responses – April (Author 2021)
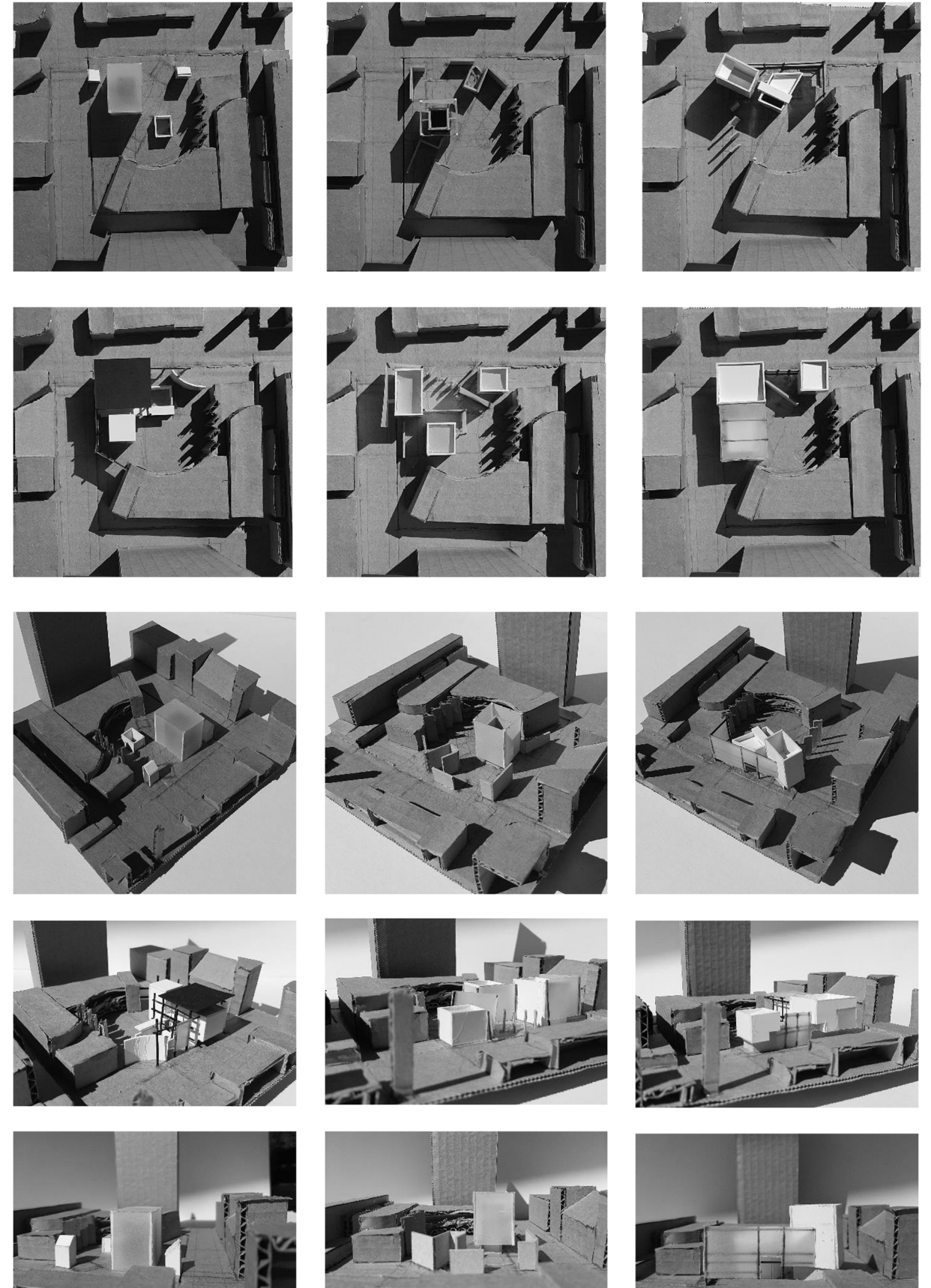
26. Preliminary maquettes – April (Author 2021)

Counter-monumentality

Counter-monumental (Bach 2016, Stevens, Franck, and Fazakerly 2012, Young 1992) architecture, which subverts or disrupts traditional monumental principles, provides an alternative to traditionally hegemonic forms of monumental space. Counter-monuments reject or renegotiate monumental ideas of subject, form, site, experience, or meaning (Stevens et al. 2012:955). An analysis of the continuum of counter-monumental interventions may provide principles with which to counter the simplistic, didactic approach of the Women's Living Heritage Monument, to recognise complex intangible heritage and the role of the individual in constructing monumental space. Although several South African projects, such as Freedom Park (2007), display counter-monumental characteristics, they are largely located outside urban areas, reducing their relevance to Lilian Ngoyi Square. For this reason, the exploration of counter-monumentality is focused on an international continuum of urban counter-monuments.

The overview of the continuum of counter-monumentality (Figure 27) begins with Maya Lin's Vietnam Veterans Memorial (1982). This intervention takes the form of a sunken scar in the landscape, contrasting the predominantly vertical articulation of traditional monuments. The scar is inhabited by a reflective black granite wall, placing the visitor in direct dialogue with the monument, subverting the traditional subjectivity of monumental space (Stevens et al. 2012:956). Another subversion of monumental subject-object relationships is provided by Jochen and Esther Gerz's 1986 Harburg Monument Against Fascism. This counter-monument encouraged citizens to carve their names into its surface before it was lowered into the ground and disappeared completely. The intervention challenged the didactic nature of monuments by encouraging the public to construct its meaning through physical interaction. Furthermore, the lowering and disappearance of the object counters the traditionally static, permanent nature of monuments, shifting the burden of memory from the monumental object to the people who interacted with it (Young 1992:272-284).

Horst Hoheisel's 1987 Aschrott Fountain in Kassel provides an alternative approach to monumental form. The form of the original Aschrott Fountain, which was demolished by Nazis in 1939, is inverted to reproduce its absence. The negative-form monument is almost invisible under the surface of the square it inhabits, but water can be heard rushing into the void it creates. This encourages the viewer to construct their own understanding of the memory and loss represented by the intervention (Stevens et al. 2012:954, Young 1992:288-294). Ambiguity in meaning is a key principle in the production of counter-monumental space, allowing the accommodation of a multiplicity of interpretations and memories without prescriptive narration. This is further explored by Peter Eisenman's Memorial to the Murdered Jews of Europe, a topographical intervention made up of unmarked stone tablets, which encourages physical interaction and exploration to provide meaning to the space (Stevens et al. 2012:961).

Finally, the New York National 9/11 Memorial by Handel Architects is a counter-monumental space which integrates loss, memory, and monumentality within a busy commercial precinct. In addition to its primary function as a memorial, the site accommodates a museum and public green spaces. The intervention commemorates the loss experienced on the site, using counter-monumental principles of inversion, topographical manipulation, and ambiguity in meaning, while providing new meaning and urban functions within the city. This layered approach, which recognises the meaning of the past while accommodating the needs of the present, provides valuable insight towards the reconciliation of the monumental and the everyday.
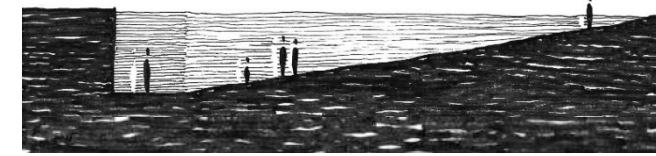
1982
Vietnam Veterans Memorial
Washington
Maya Lin

1986
Harburg Monument Against Fascism
Hamburg
Jochen Gerz, Esther Shalev-Gerz
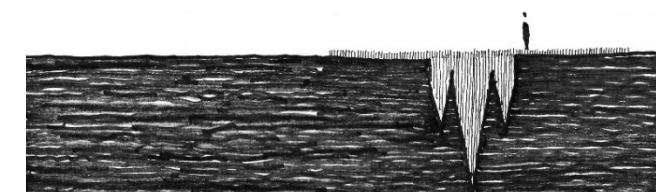
1987
Aschrott Fountain
Kassel
Horst Hoheisel
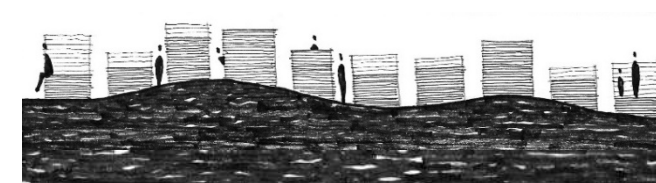
2005
Memorial to the Murdered Jews of Europe
Berlin
Peter Eisenman
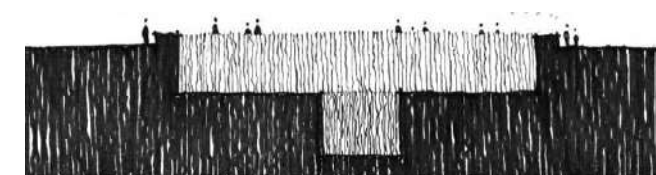
2011
National 9/11 Memorial
New York
Handel Architects

27. The international continuum of counter-monumentality (Author 2021 adapted from Stevens et al. 2012, Young 1992)

Flexibility and temporary use

While counter-monumental responses provide possibilities to create urban celebratory or commemorative interventions which are representative of complex history, there is the possibility that counter-monumental approaches may reproduce the normative, static nature of traditional monumentality if not applied critically (Stevens et al. 2012:967-968). This further emphasises the importance of recognising change and user agency in such an intervention, to ensure the accommodation of urban uncertainty. Therefore, the intervention must be designed to achieve spatial flexibility, to counter the potentially static nature of counter-monumentality with the transience of everyday urban activity in the CoT. This requires an understanding of relevant spatial principles with which to foster flexibility in the south African context (Figure 28).

Flexibility in architecture operates at several scales, depending on the specific context of application. Due to the complexity of the proposed intervention, multiple approaches and scales to flexibility must be understood. While the Baragwanath Taxi Rank is a massive scheme overall, its approach to flexibility is translated down to the scale of furniture and basic infrastructure (Lipman 2009: 140-141). Through the use of robust materials and forms, seating, tables, and structural elements encourage appropriation and user-driven change to suit specific needs. These elements, in many cases designed specifically to accommodate informal traders, provide valuable insight into flexible design on a small scale.

Noero Architects' Christ Church in Somerset West explores flexibility in a single space, using volumetric relationships to demarcate and separate different functions. The increased volume of a sacred space in the centre of the church differentiates it from the surrounding support spaces, which may be used to accommodate larger functions when necessary (Noero 2018). This approach accommodates choice and programmatic complexity, without the need for multiple structures.

The Sol Plaatje University Student Resource Centre, by Designworkshop, explores flexibility at the scale of an entire building. By separating the main structure, services, and skin from one another, the functions of each floor of the building become interchangeable, defined by moving panels and lightweight partitions. The separation of elements thereby provides opportunities for future change, ensuring resilience and continued relevance of the intervention.

Noero's (2018:29) assertion that programmatic and spatial flexibility should be embraced is evident in Noero Wolff Architects' 2003 Usasazo Secondary School in Khayelitsha. This complex showcases flexibility at an urban scale, using the arrangement of built form on site to create interstitial spaces of different scales and characters to accommodate different activities over time. In addition, the architecture can be opened to the street edge, changing the relationship between internal and external space to extend the public realm when appropriate.

In order to meet the complex spatial and programmatic requirements at Lilian Ngoyi Square, flexibility must be considered at all scales of the intervention, in internal and external spaces. This overview of flexibility in South African architecture will prove invaluable in this regard, guiding the development of a more robust monumental architecture which is responsive to change and urban transience. By accommodating spatial and programmatic flexibility, the potential pitfalls of monumental and counter-monumental architecture may be avoided, a key requirement to ensure the appropriateness of the proposed scheme.
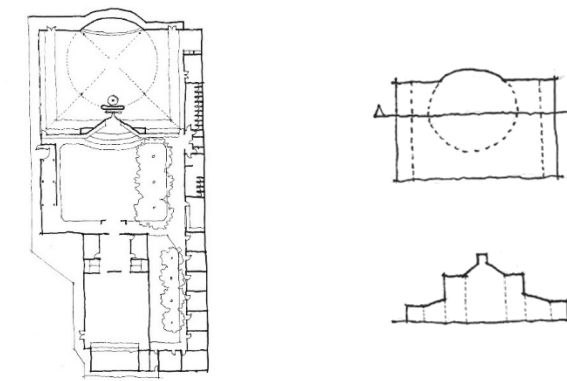
Ongoing

Christ Church

Somerset West

Noero Architects
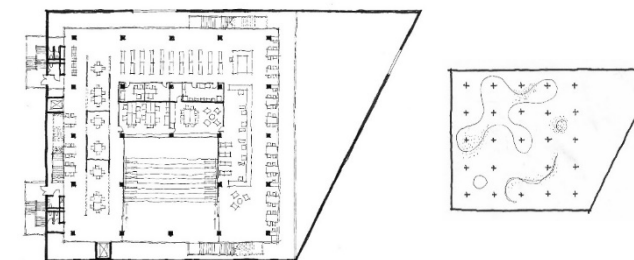
2018

SPU Student Resource Centre

Kimberly

Designworkshop
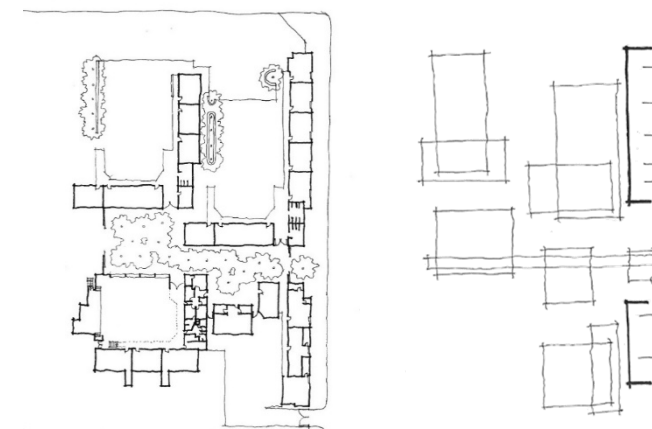
2003

Usasazo Secondary School

Khayelitsha

Noero Wolff Architects

28. Flexibility in South African architecture (Author 2021, adapted from Lipman 2009, Noero 2018)

Revised concept

The application of counter-monumental principles and accommodation of flexibility (Figure 29) have the potential to generate a more appropriate, layered response at Lilian Ngoyi Square. To this end, the initial concept's dominating formal and spatial responses must be reconsidered. Given the importance of accommodating everyday urban activity at ground level, as well as the definition of the site's edges, a more horizontally focused intervention is appropriate. This, alongside the utilisation of the existing basement spaces below the public square, will allow the architecture to remain responsive to the human scale and activity along the street edge. The value of the public space within Lilian Ngoyi Square, despite its current poor definition, must be retained as far as possible. This highlights the potential of topographical manipulation as a means of defining space without undermining the public contribution of the square. This will also allow the representation of intangible heritage alongside pragmatic provisions. In addition to urban and historical responses, care must be taken to ensure that spaces are robust and flexible, to accommodate multiple uses over time. The reconsideration of the formal and spatial language of the scheme, guided by principles extracted from precedents, led to the generation of a revised concept (Figure 30) which focuses on topographical manipulation and subterranean inhabitation to counter the form of the Women's Living Heritage Monument, retain the integrity of Lilian Ngoyi Square as an accessible public space, and accommodate the transient urban activities and intangible heritage which make up the site.

Horizontality

Subversion of object

Topographical manipulation

Inversion of form

Robust multi-functional form

Volumetric differentiation

Separation of parts

Variable spatial relationships
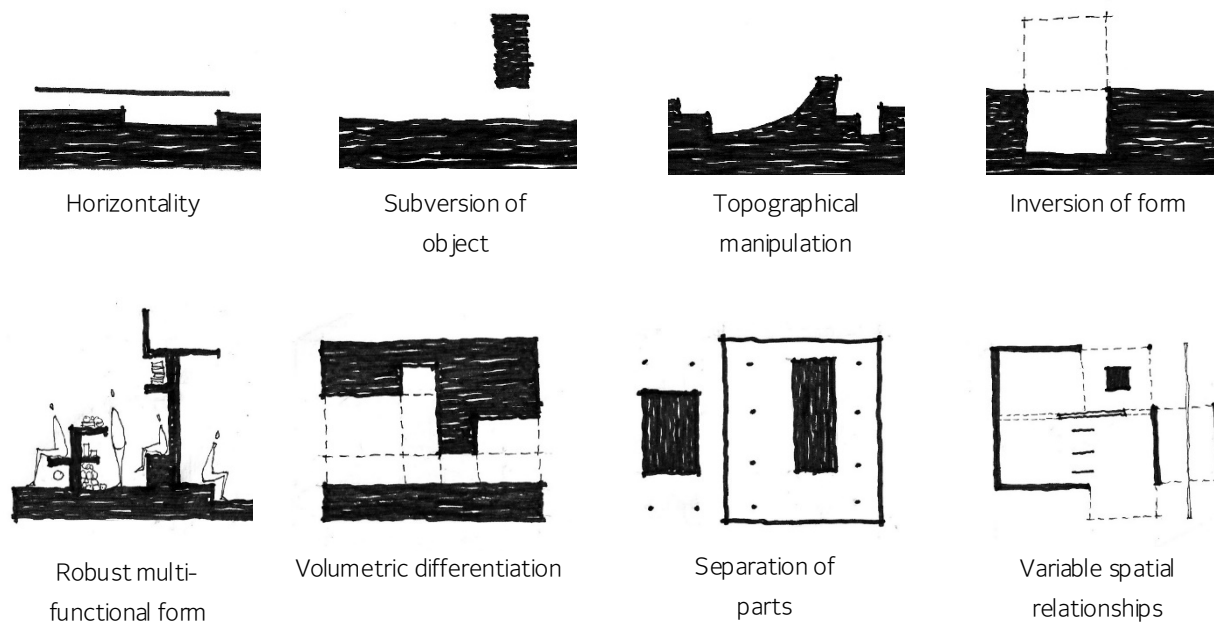
29. Key principles extracted from precedent (Author 2021)
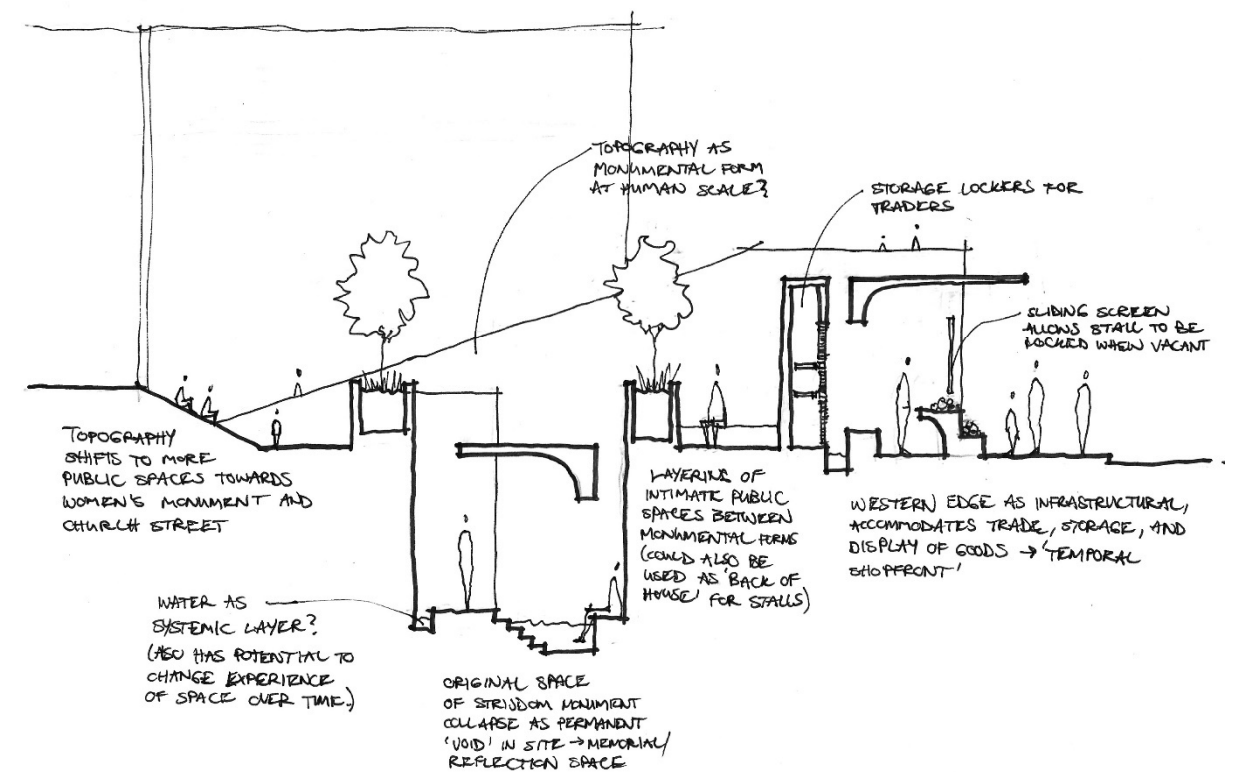
30. Topographical monument concept (Author 2021)

Design Development

The development of the topographical concept initiated a series of spatial explorations in section (Figures 31 & 32) and elevation (Figure 33). These sketches explored scale, form, and spatial interactions in relation to the surrounding context. Interventions stepped up from the ground floor plane of the square to the scale of the surrounding urban context. However, when translated to elevation, these explorations were just as spatially and formally dominating as the initial explorations, with little relation to the extracted principles of counter-monumentality. For this reason, the decision was made to emphasize the subterranean portion of the intervention to ensure the existing monumental conditions of the Women's Living Heritage Monument are not recreated. However, as the intervention has a role to play in defining the urban character of the precinct it inhabits, a response to the surrounding urban scale is still important. Therefore, the scale of the intervention responds to its urban context on the corner, to define the edge of the block and threshold into the Civic Precinct, and steps down towards the pedestrian and trade activity along the square's western edge. This expresses the architecture's urban and civic character while allowing it to respond to the human scale, a combination of monumental and counter-monumental forms (Figure 34).
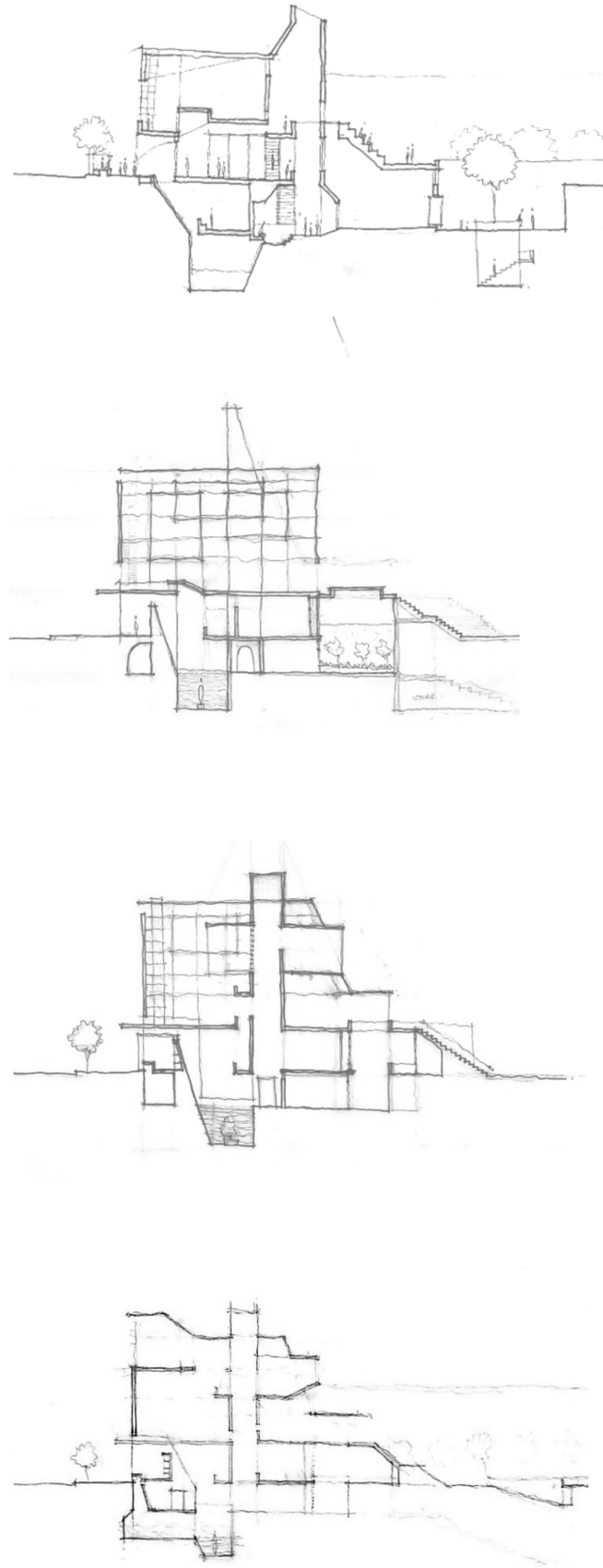
31. Sectional development – May (Author 2021)
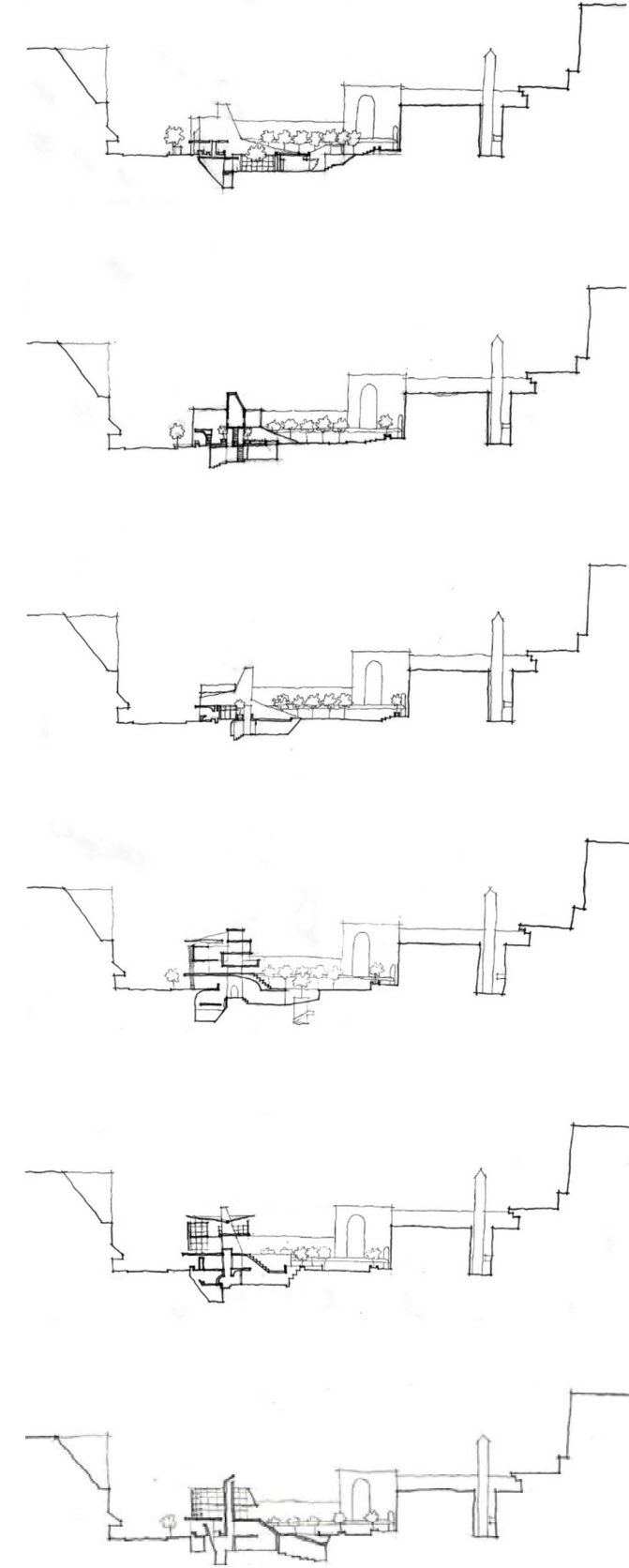
32. Topographical development – May (Author 2021)

Monumental condition

Counter-monumental condition
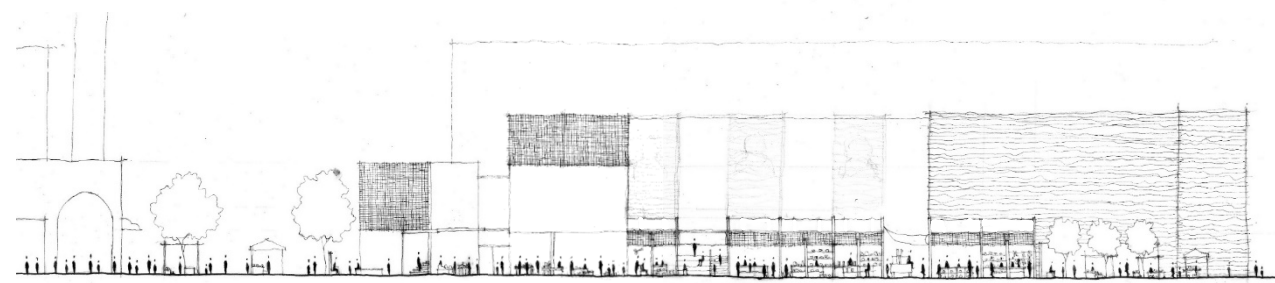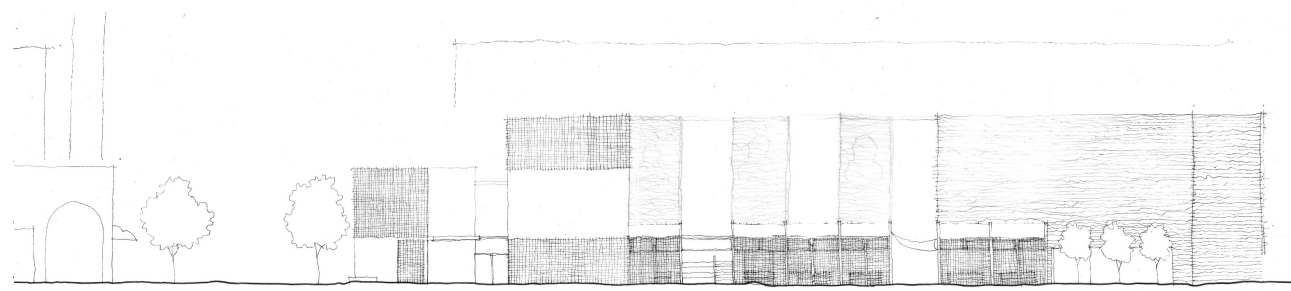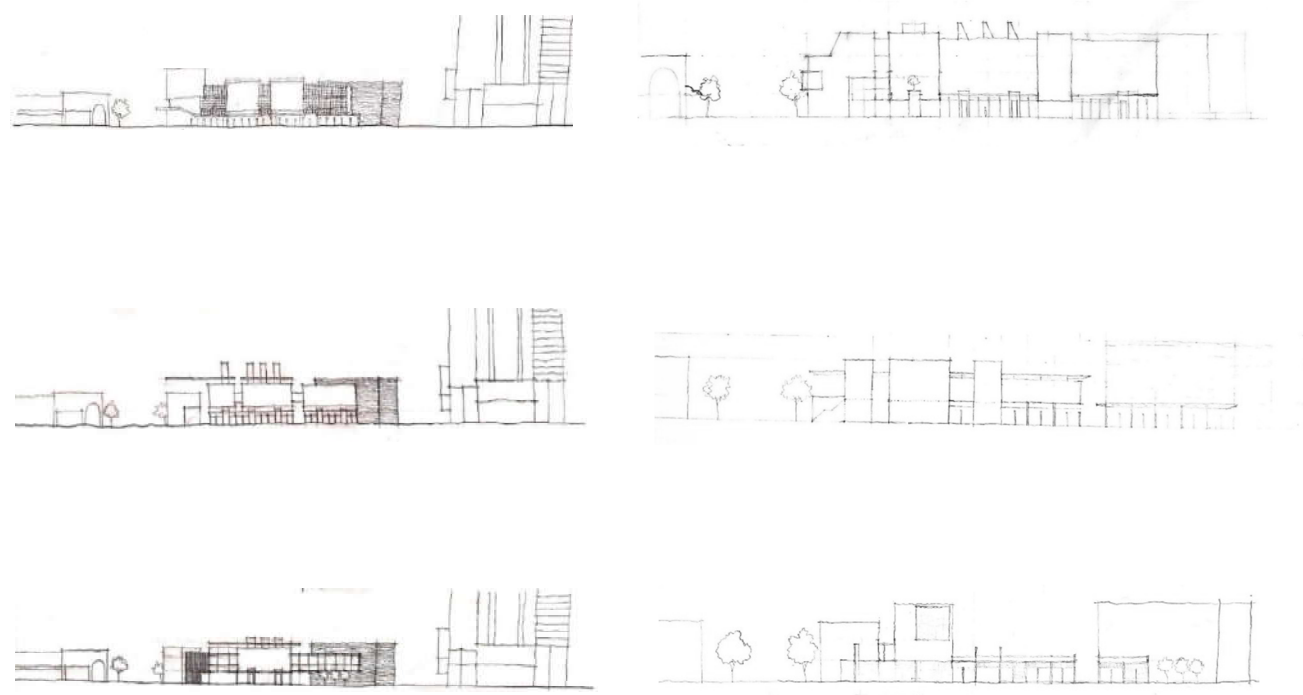
33. Elevation and change – June (Author 2021)
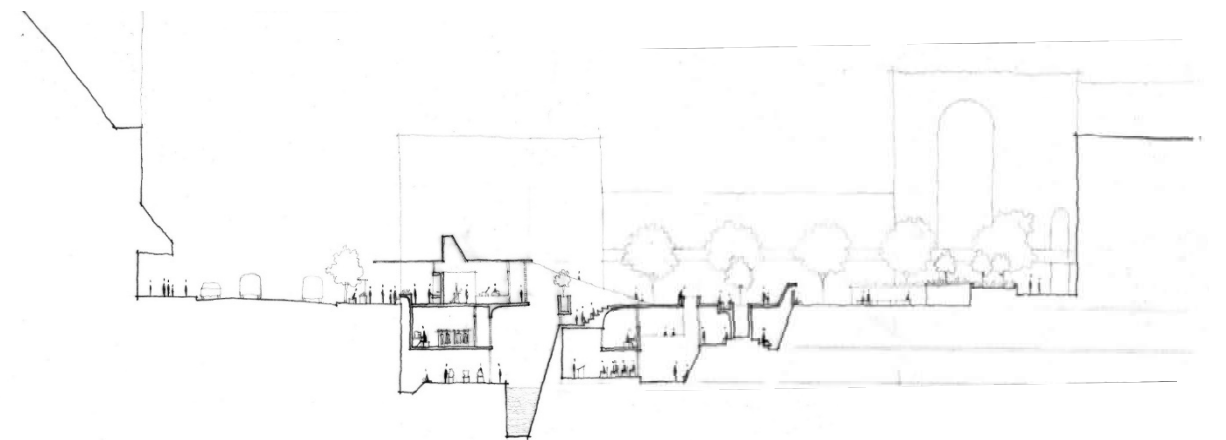
34. Converging conditions - July (Author 2021)

Refined concept

The reconciliation of the static, didactic conditions of traditional monumentality with the complexity and uncertainty of everyday urban inhabitation requires a layered approach. The process of design exploration has elucidated several possibilities in this regard. Ultimately, it has been determined that the most appropriate response to the project intentions is a combination of monumental and counter-monumental principles to generate a flexible urban intervention which accommodates and celebrates the contributions of everyday urban inhabitants to the city's identity. It is important, however, that the application of monumental form is subverted to counter the shortcomings of traditional monumental spaces. Therefore, the architecture will be generated as a combination of counter-monumental form, subverted monumental objects, and flexible spaces to facilitate user agency. These layers form the basis of the refined concept (Figure 35), which deals with: surface – a counter-monumental articulation of the ground plane which responds to the site's history and current role as a public space; monoliths – traditional monumental forms inserted on site and subverted through inhabitation, suspension, and separation from the ground (denying permanence and connection to place); and veil – a frame structure which latches onto and mediates the previous layers to allow spatial flexibility and appropriation, emphasising the autonomy of inhabitants and potential for future change.
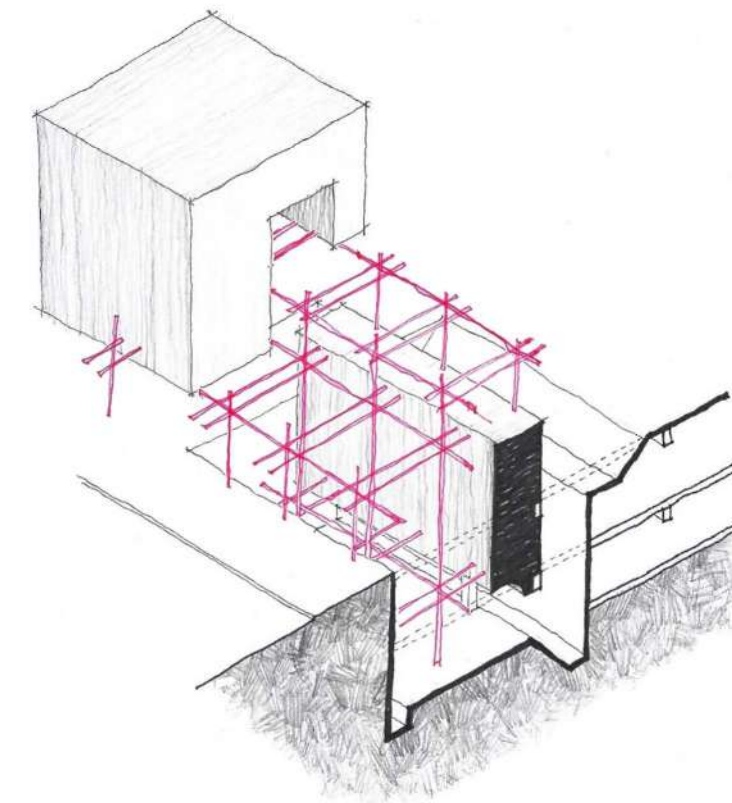
35. Layered monument concept (Author 2021)

Conclusion

The recognition of Lilian Ngoyi Square's history and meaning, alongside the enhancement of its important urban functions is paramount to ensure it becomes a space which represents an inclusive identity. This requires the accommodation of multiple meanings and transient use in a new intervention. Principles of counter-monumentality and spatial flexibility will guide the generation of a monumental architecture which counters the shortcomings of the Women's Living Heritage Monument and its separation from everyday urban space. By recognising and celebrating a multiplicity of memory and the contributions of diverse urban inhabitants to the city's heterogenous identity, the architecture will facilitate the reconciliation of the monumental and the everyday.

3 | Synthesis

Introduction

The reconciliation of the monumental and the everyday at Lilian Ngoyi Square requires the recognition of the site's history, multiple meanings, and contemporary urban role. Design research has elucidated the potential of a layered concept to address these needs. The architecture, therefore, will be generated through a layering of history, meaning, and everyday urban need. Explorations of subverted monumentality, counter-monumentality, and flexibility will form the basis of design iterations. The layered concept will further inform the architecture's technological and systemic expression, towards an intervention which reconsiders the role of monumental architecture in representing an inclusive identity in the City of Tshwane.

Consolidated design informants

The preliminary design response is based on a combination of historical, urban, and theoretical informants as discussed in previous chapters. The historical response must acknowledge and represent several key aspects of the site's history. First, it's initial role as a space of social and economic exchange as the site of the Market Hall must be celebrated. Next, acknowledgement of the site's role in oppression and the resulting violence of the Wit Wolf Massacre must be commemorated to highlight its initial re-scripting and the loss (of meaning, property, livelihoods, and lives) it facilitated. Finally, the physical collapse of the Strijdom Monument and this event's importance in allowing the latest re-scripting of the site, as well as its potential to harbour new meaning to contemporary urban citizens, must be highlighted.

Alongside the response to history, the urban response must provide definition of the site's corner, to emphasise the threshold into the civic precinct and create a dialogue with the precinct's surrounding urban scale. Additionally, the western edge of the site must be defined to enhance the existing (and potential future) activities which occur here, create enclosure for the square, and create a public interface which mediates the busy street and ceremonial space of the square. The internal edge of the intervention must be articulated to create different conditions for public and semi-public gathering, rest, and inhabitation. This requires a grading to mediate the transition from the Women's Monument and open public square to more intimate, sheltered spaces which provide respite from the surrounding scale and activity. Finally, the intervention must create a dialogue with the Women's Living Heritage Monument. These primary urban and historical responses will guide the scheme's resolution, using principles of counter-monumentality and flexibility to accommodate the multiplicity and transience of urban memory and inhabitation. Using the synthesised design informants, explorations were undertaken, in plan, to explore the possibilities of intervention. Numerous iterations were conducted (Figure 36), but three key iterations (Figures 37 – 39) contextualise the outcome.
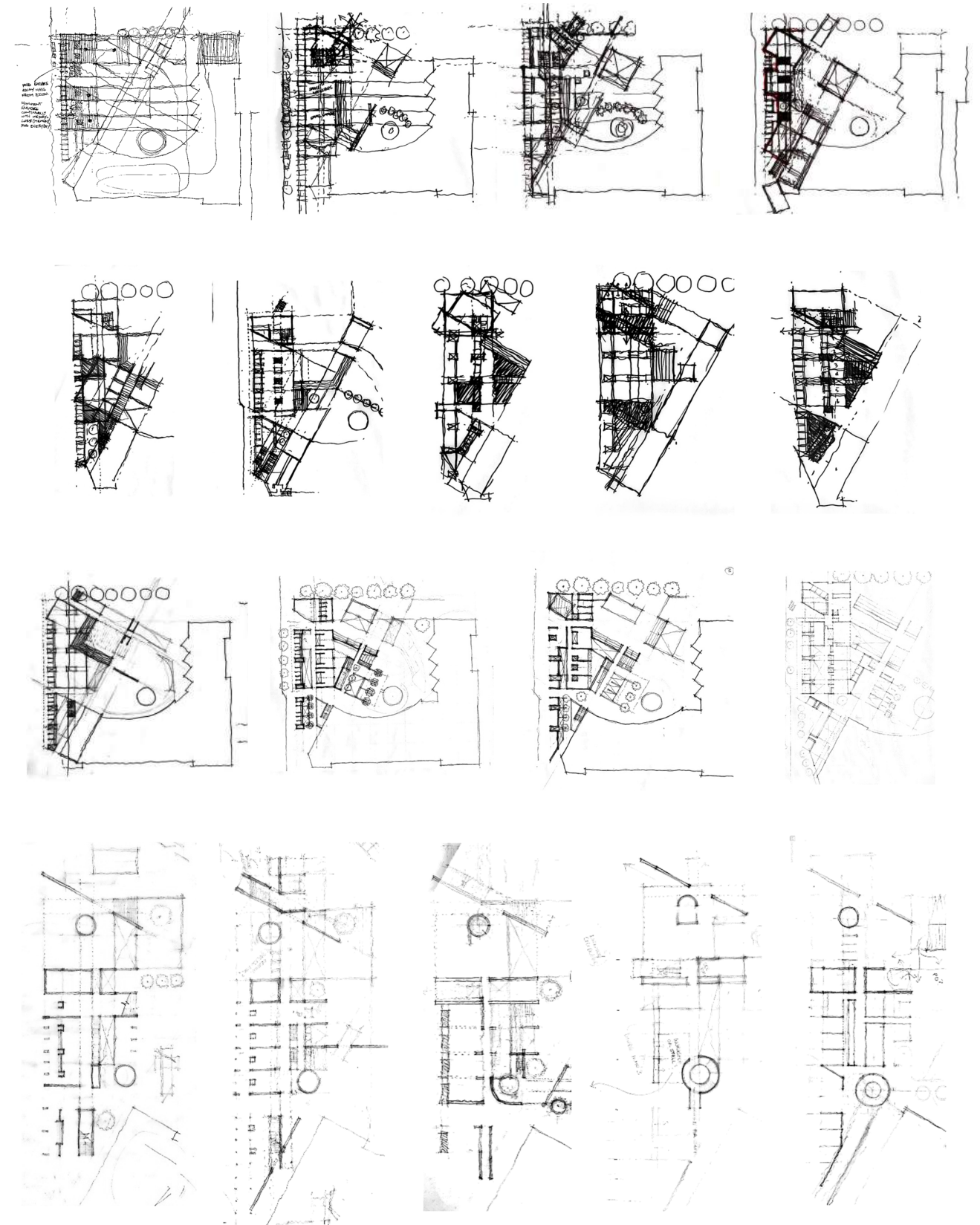
36. Ground floor plan development – May to September (Author 2021)
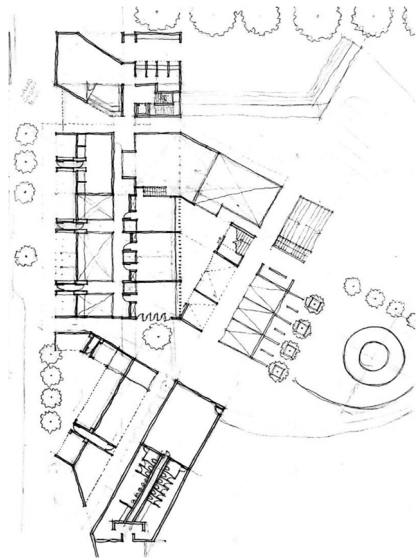
37. Key iteration 1 (Author 2021)

38. Key iteration 2 (Author 2021)

39. Key iteration 3 (Author 2021)

Iteration 1

A site response was developed based on the geometries of the Women's Living Heritage Monument and surrounding buildings. While this exploration allowed the preliminary arrangement of programs and supplementary spaces, the geometry became very complex, reducing legibility. Furthermore, the built area of the intervention intruded too far into Lilian Ngoyi Square, compromising its accessibility.

Iteration 2

In response to the shortcomings of the previous iteration, the geometry of the edge intervention was simplified and the geometry of the Women's Living Heritage monument was used only to order the landscaping and public spaces within the square. However, the resolution of the square was still unclear and ill-defined, and the corner became almost fully occupied by the building, reducing its capacity to accommodate urban appropriation

Iteration 3

This iteration moved away from the dominant geometry of the Women's Monument in favour of historical informants such as the Strijdom Monument's circular fountain and the existing rectilinear grid of the site's basement structure. Additionally, the interior edge of the intervention was restrained, allowing more space to be retained within the public square. Furthermore, the corner was opened to allow more space for a temporary market space and other urban appropriation. This formed the basis of the iterations that followed (Figure 40).
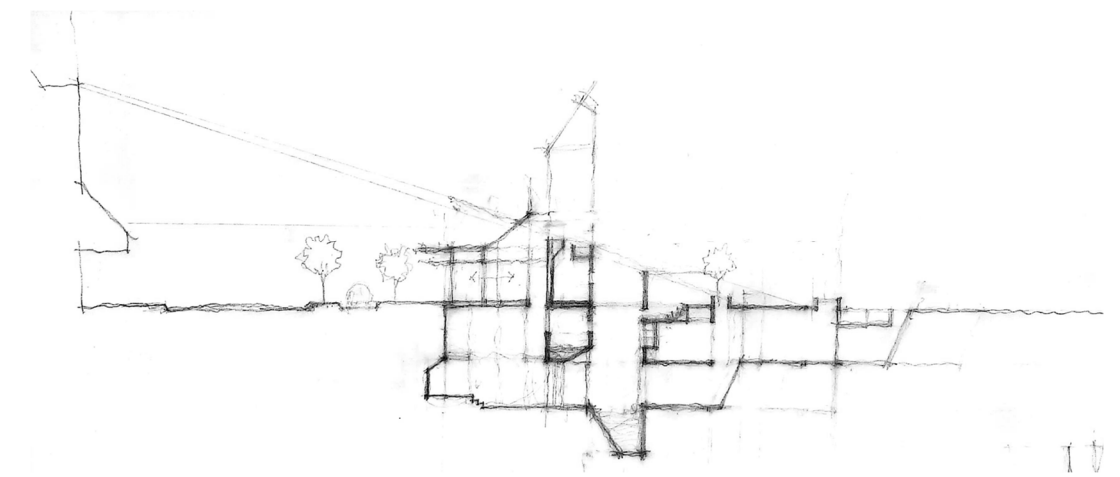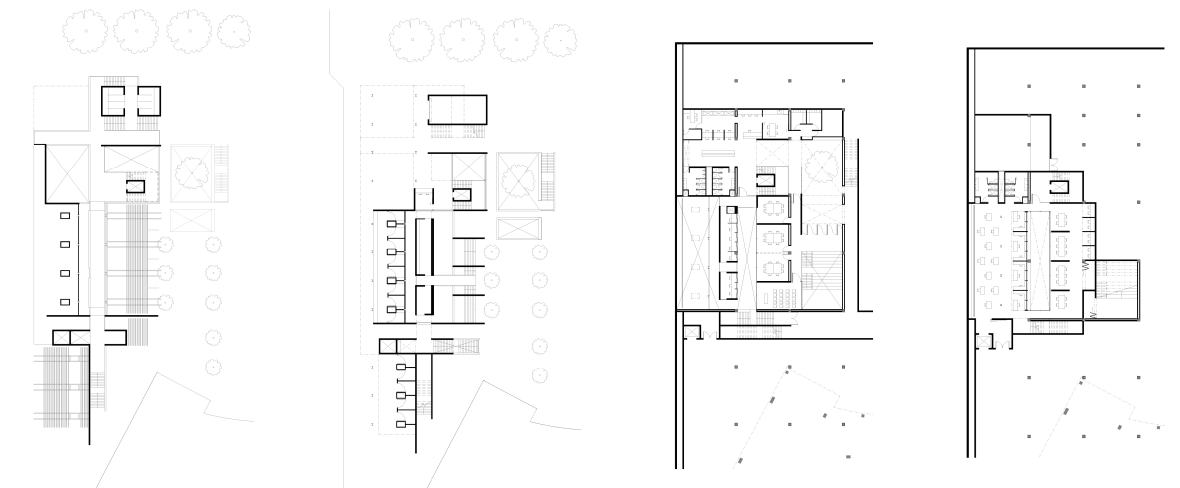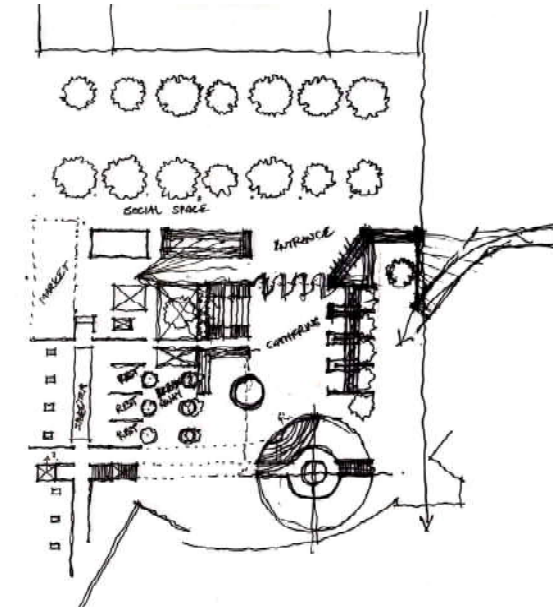
40. Final iterations – September to November (Author 2021)
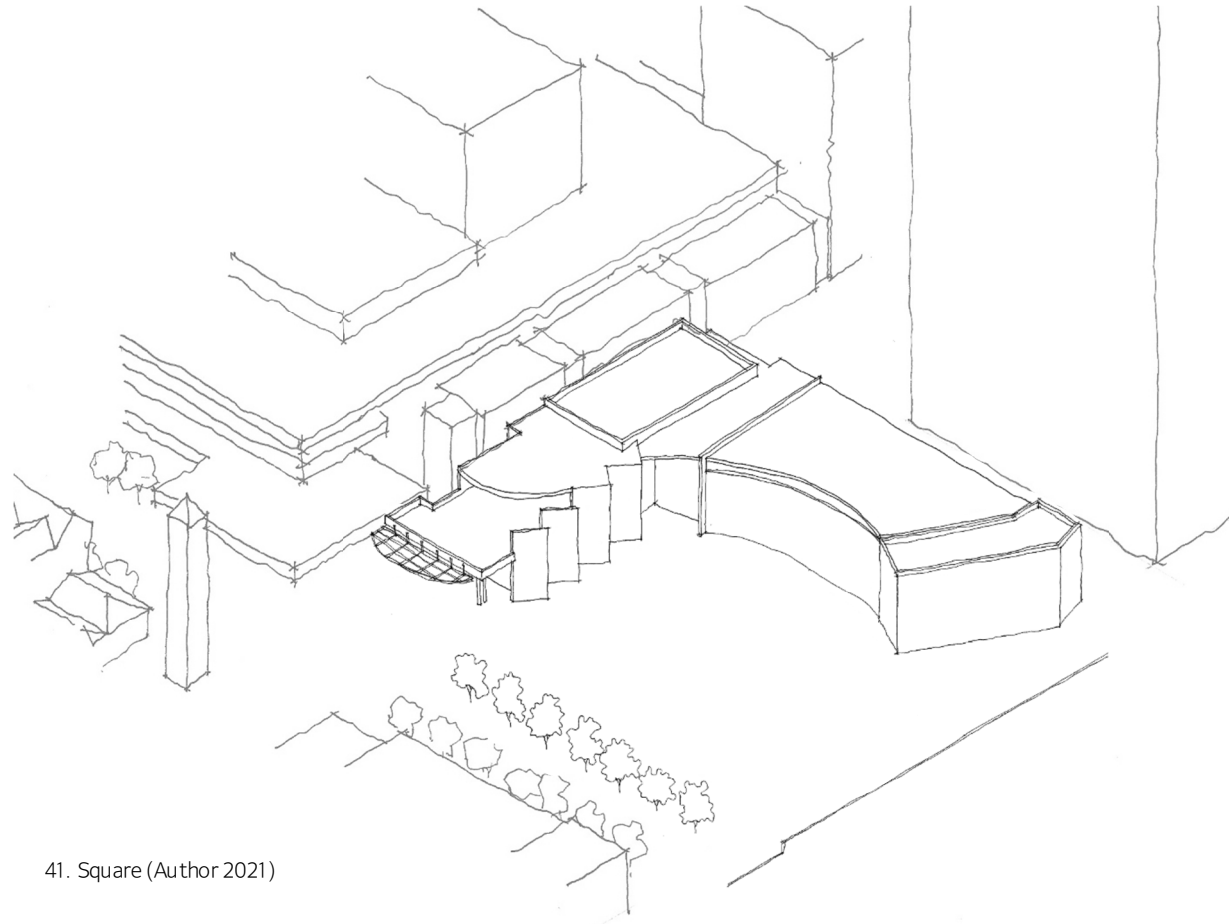
41. Square (Author 2021)

Design outcome

Ultimately, the design outcome (Figure 41-76) is the culmination of numerous explorations and iterations. It is a product of the site's rich history and the complexity of its urban role, an integration of monumentality, celebration, history, loss, and everyday urban inhabitation. This complex layering has been carried through to each aspect of the design, to provide flexibility and opportunities for spatial appropriation alongside monumental and counter-monumental gestures. Based on the layered concept which orders the architecture, its articulation will be briefly unpacked to contextualise the proposal and its technical resolution.
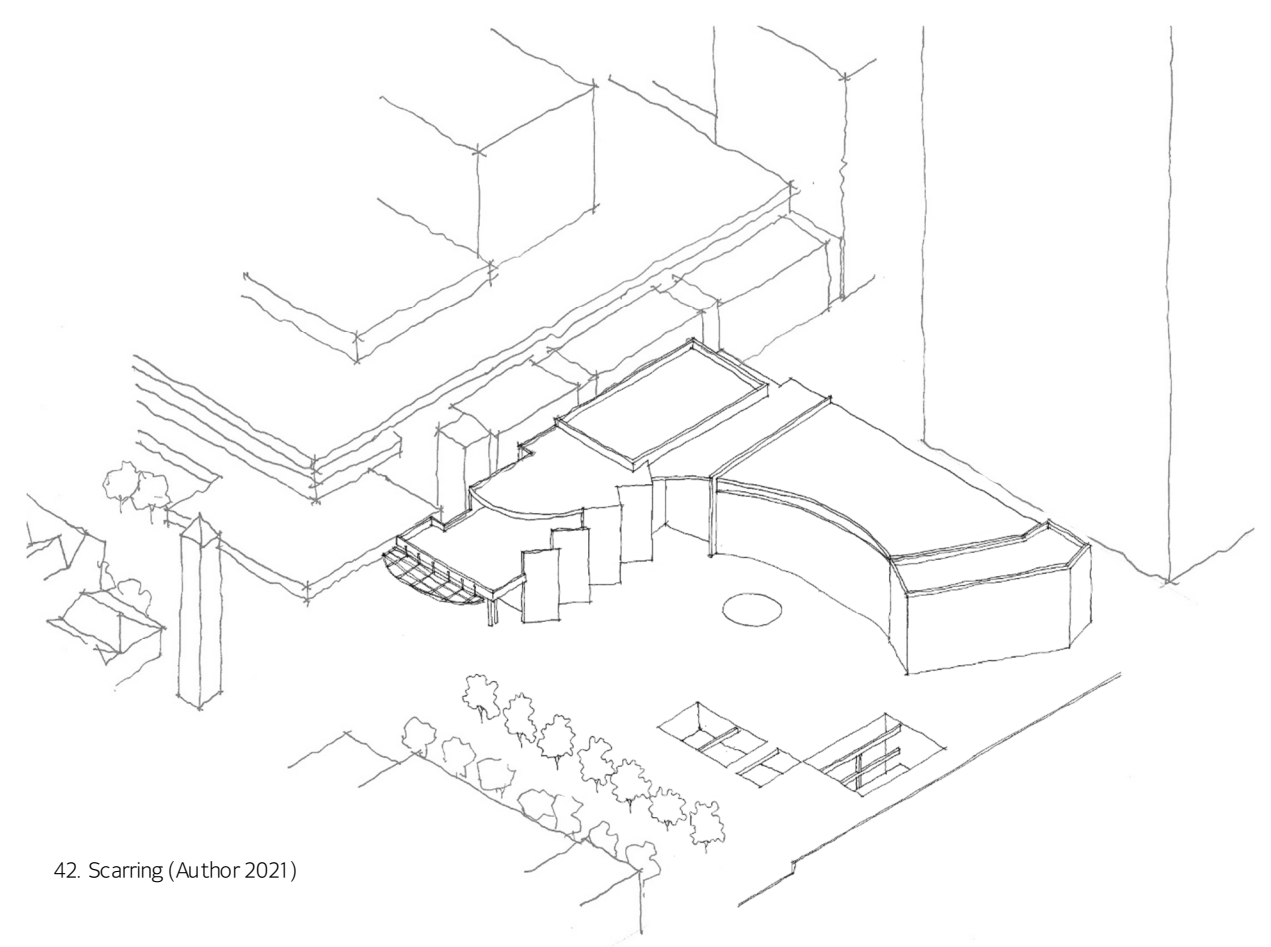
42. Scarring (Author 2021)

Surface - scarring

The first layer of intervention is the removal of parts of the square's surface, exposing the void and structure of the parking garages below. This responds to the footprint of the Strijdom Monument's fountain and collapse, a counter-monumental response which scars the site and allows the insertion of new meaning while acknowledging part of the site's intangible heritage. The horse statue which was part of the Strijdom Monument will be reintroduced at the bottom of a void, acknowledging the site's historical oppressive role while subverting the previous status and power of the Strijdom Monument.
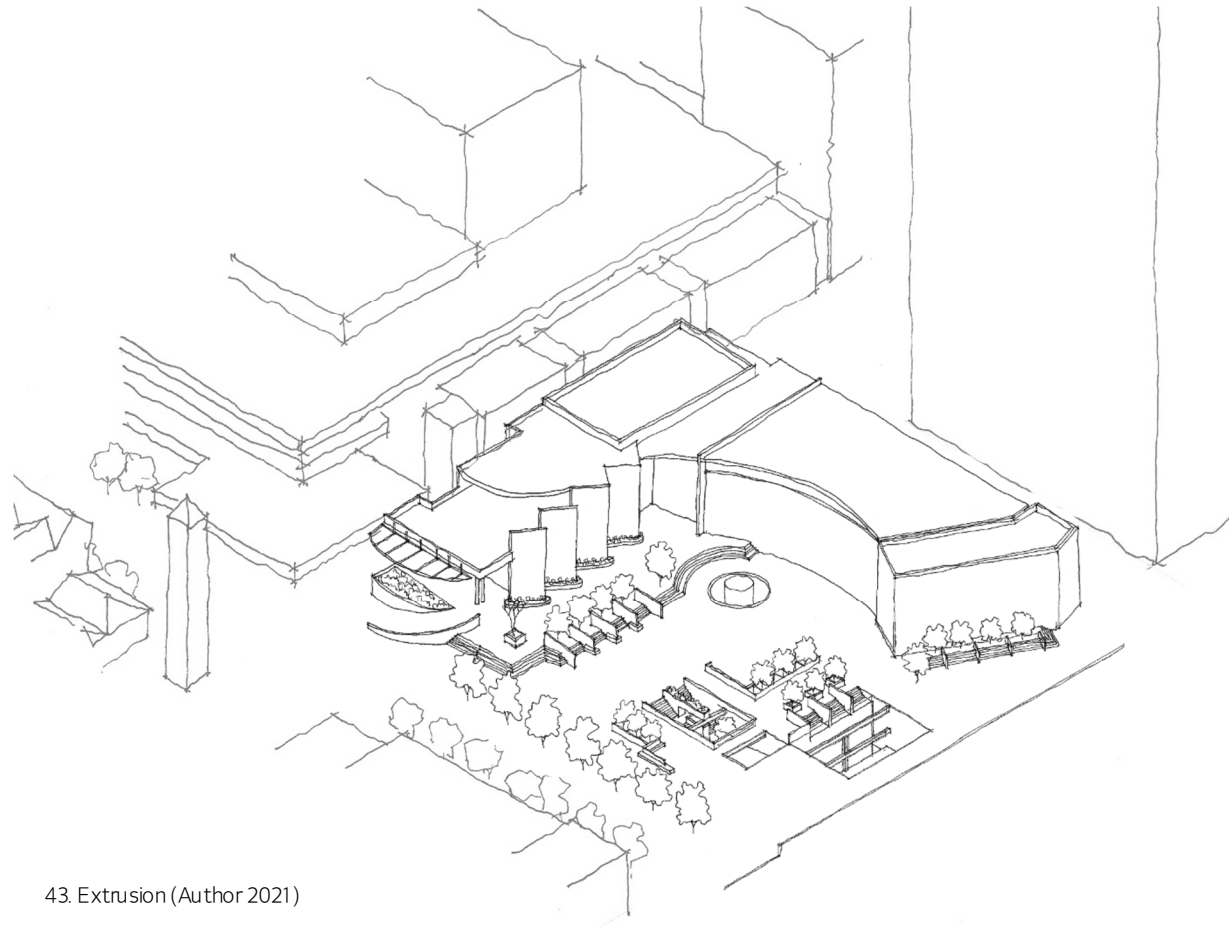
43. Extrusion (Author 2021)

44. Suspension (Author 2021)

Surface - topography

The next layer concerns the manipulation and definition of the square's surface, providing flexible conditions for inhabitation. The footprint of the Market Hall is used to inform the large public space in the square, while more granular spaces define the edges of the Women's Living Heritage Monument and new subterranean spaces. Ranging from exposed to intimate, these outdoor spaces allow the accommodation of a multitude of public functions over time, alongside the representation of the site's history and meaning. Furthermore, the entrance to the Women's Living Heritage Monument is raised, while entrances to the new intervention are sunken, creating a contrasting dialogue between monumental and counter-monumental articulations.

Monolith - suspension

Following the definition of the public surface, a monolithic object is inserted in the new void. It primarily houses a memorial for the victims of the Wit Wolf Massacre and creates a public walkway which allows views of the site of the murders (now inhabited by the Women's Living Heritage Monument). This object appears monolithic, but is carved out, allowing inhabitation. Furthermore, the "suspension" of the object separates it from the ground, creating a sense of impermanence and separation from place, countering traditional monumental notions of permanence and connection to the ground. Its position on site marks the boundary of the Strijdom Square collapse, and defines the subterranean spaces beneath it, further subverting its autonomy as a monumental object.
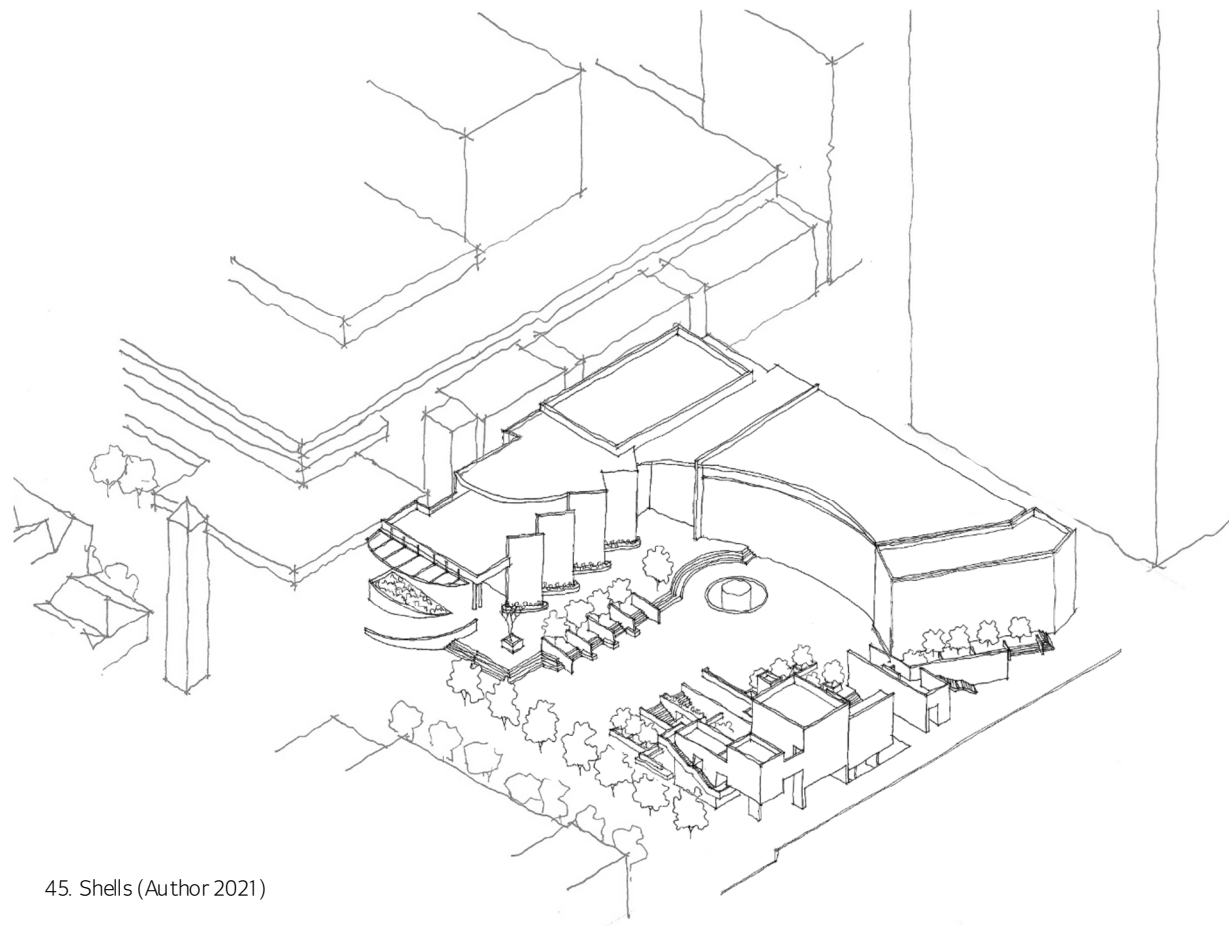
45. Shells (Author 2021)

46. Frame (Author 2021)

Monolith - shells

Further monolithic interventions, drawing from the surrounding urban fabric, respond to the urban scale while creating shelter and enclosure for the square. The corner object is broken up to respond to different heights, stepping up from the square and Church Street to the scale of the Women's Living Heritage monument. It serves an important function as a threshold into the Civic Precinct and a landmark along the ceremonial boulevard. These monumental forms are hollowed out, lifted off the ground and opened towards the square, subverting their mass and permanence, allowing appropriation underneath, between, and within their "shells". A secondary monolith defines the southern end of the intervention, creating entrance thresholds to Lilian Ngoyi Square, the Women's Monument, and the new memorial. This object also announces a subterranean link to the existing basement parking garages and subverted horse statue, linking several layers of the site's intangible heritage with the Women's Monument.
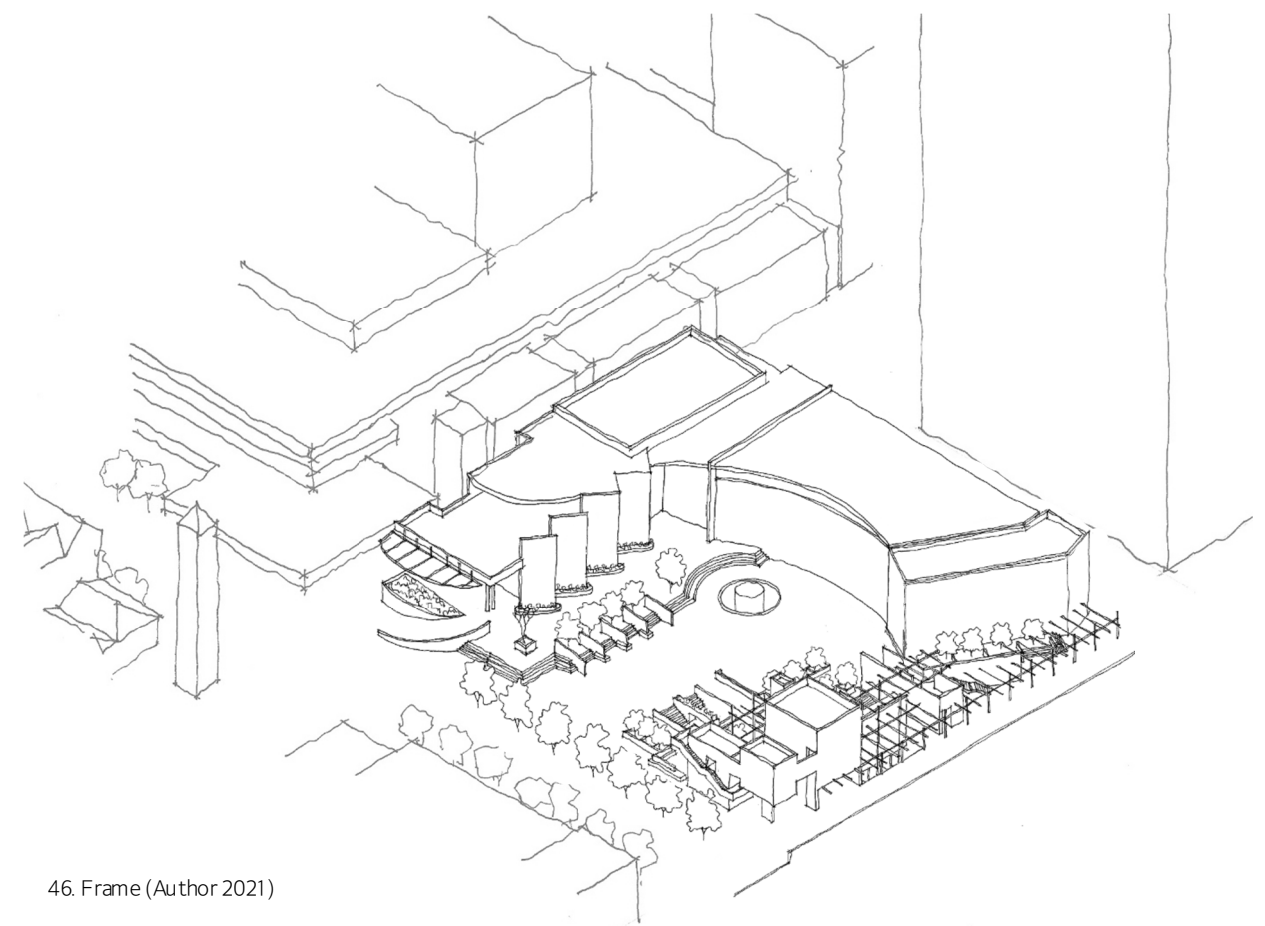
Veil - frame

The addition of the veil, a steel framed structure, serves to mediate the previous layers with one another and their surrounding urban environment. The structure runs along the western boundary of the site, creating edge definition and continuity while retaining porosity. This serves as a reinterpretation of the site's historical and contemporary retail edge, accommodating informal traders and other urban inhabitants. It inhabits and spans the void, allowing this space to be used while retaining its visibility. This layer provides numerous possibilities to augment and alter the previous layers of the scheme, fostering flexibility and appropriation.
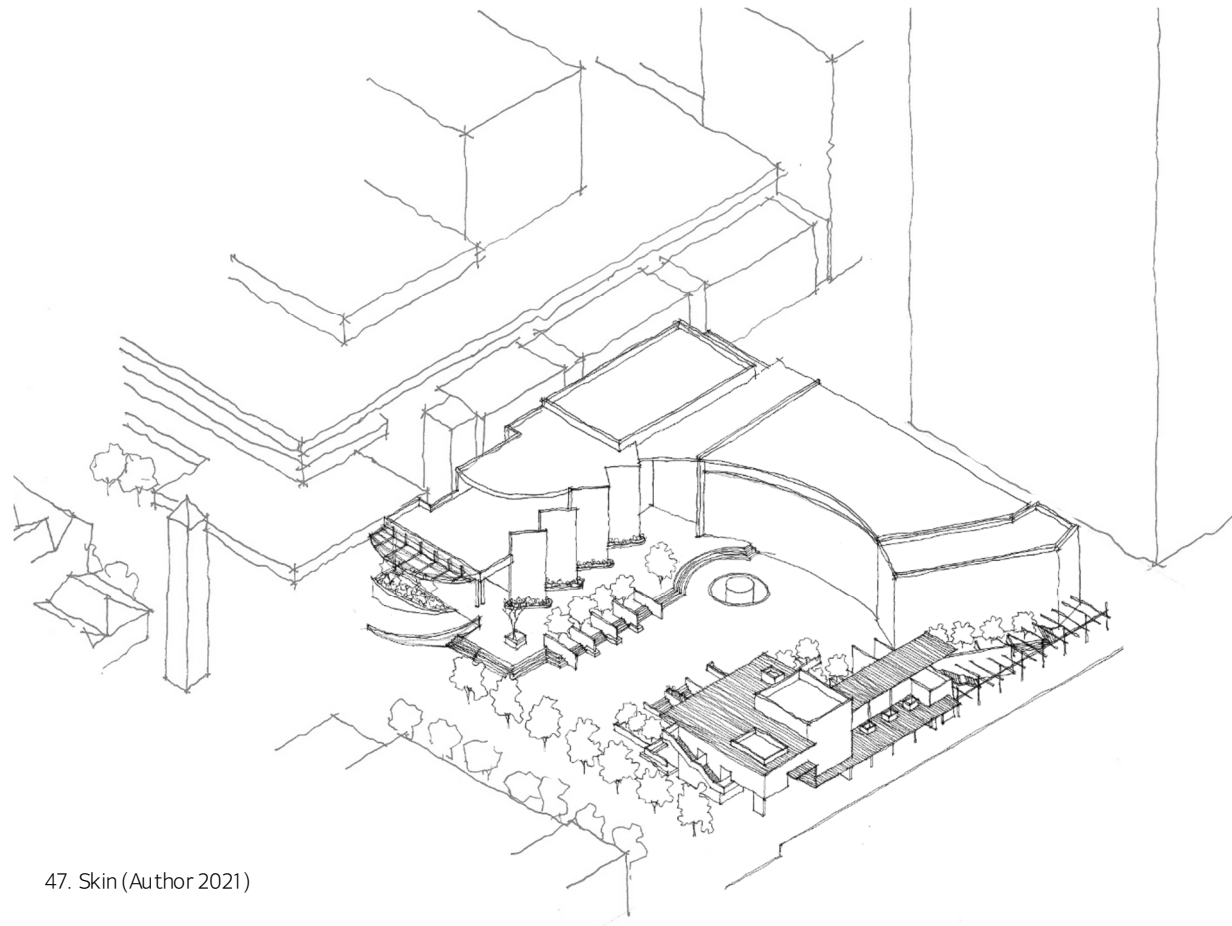
47. Skin (Author 2021)

Veil - skin

The final layer of the design deals with the cladding of the veil, creating enclosure and security where necessary. Standing seam metal roofing is used as a reference to the corrugated roof sheeting of the Market Hall and forms several roofs which tie the layers of the scheme together. Enclosed market stalls are created on the site's edge, alongside informal trade spaces and a communal market. Parts of the frame are left exposed, creating different conditions along the edge, with varying degrees of definition and control. This also suggests the possibility of future extension or alteration to accommodate future needs, ensuring the scheme remains resilient over time.
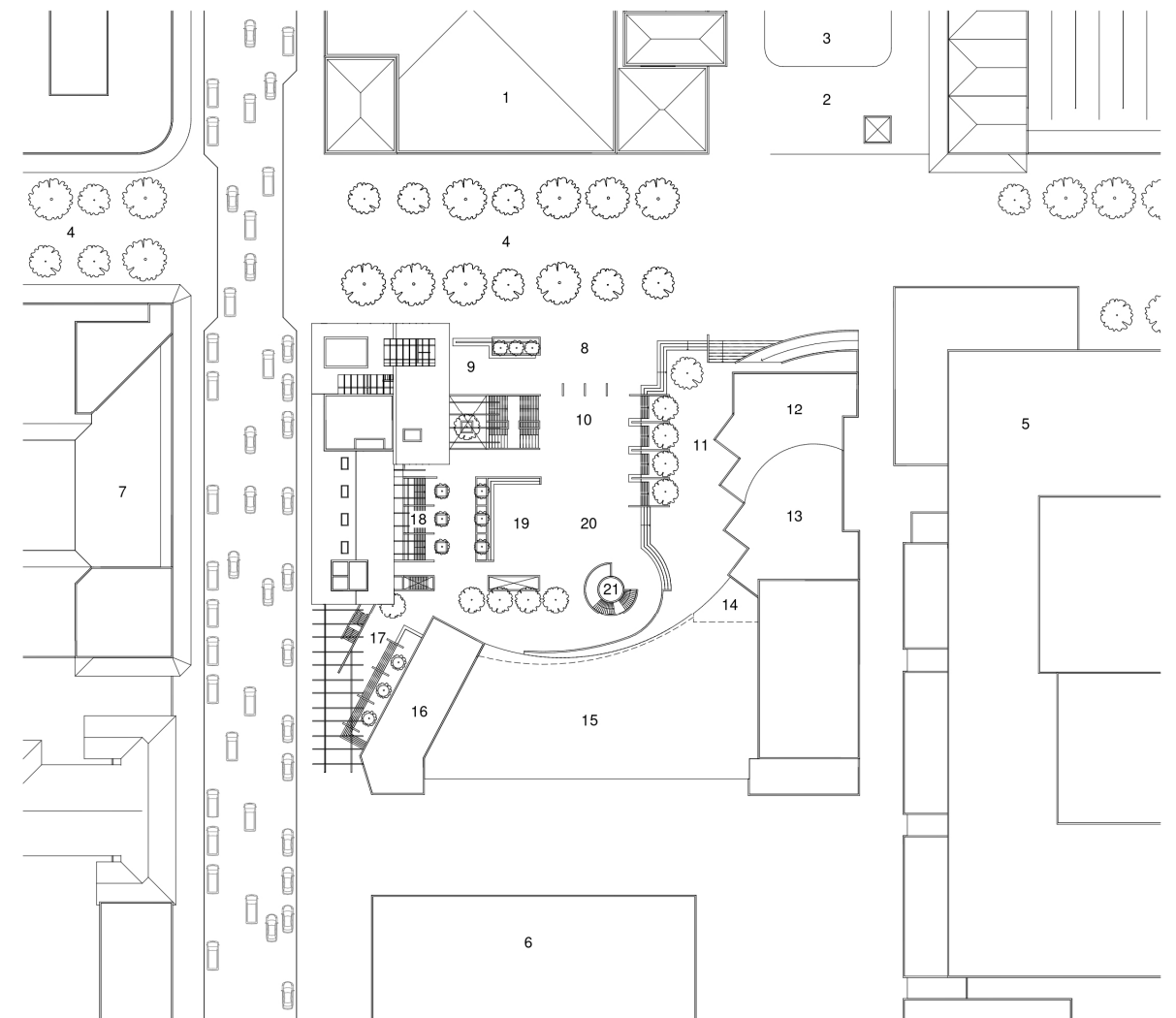
Site Plan
Not to scale

1. Sammy Marks Shopping Centre
2. Sammy Marks Square
3. McDonald's
4. Church Street Market
5. South African State Theatre
6. ABSA Tower
7. Standard Bank Building
8. Lilian Ngoyi Square forecourt
9. Market entrance and public seating
10. North square entrance
11. Sheltered rest spaces
12. Women's Monument restaurant
13. Women's Monument shop
14. Women's Monument entrance
15. Museum exhibition
16. Public ablutions and square
17. South square entrance
18. Memorial spaces
19. Public gathering space
20. Performance space
21. Subverted statue

48. Site Plan (Author 2021)
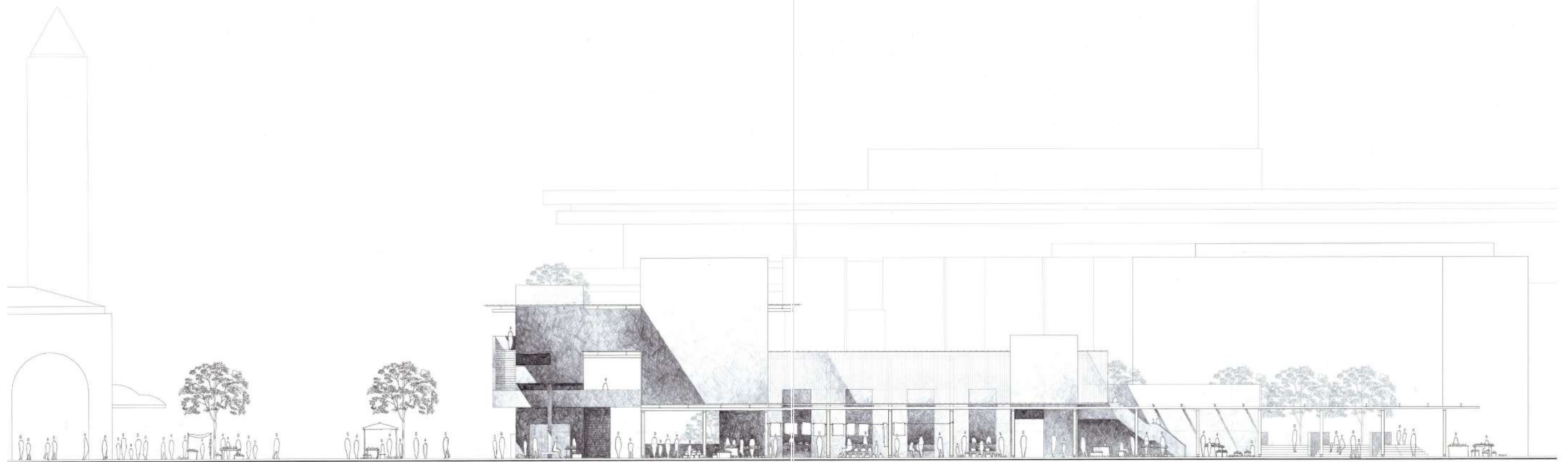
West Elevation

Not to scale

The west elevation serves as a backdrop to the informal trade and pedestrian activity which take place along this edge. The architectural articulation transitions from the mass and scale of the corner monolith to the light structure of the veil, which extends beyond the intervention, mediating monumental and pedestrian scale.

49. West elevation (Author 2021)
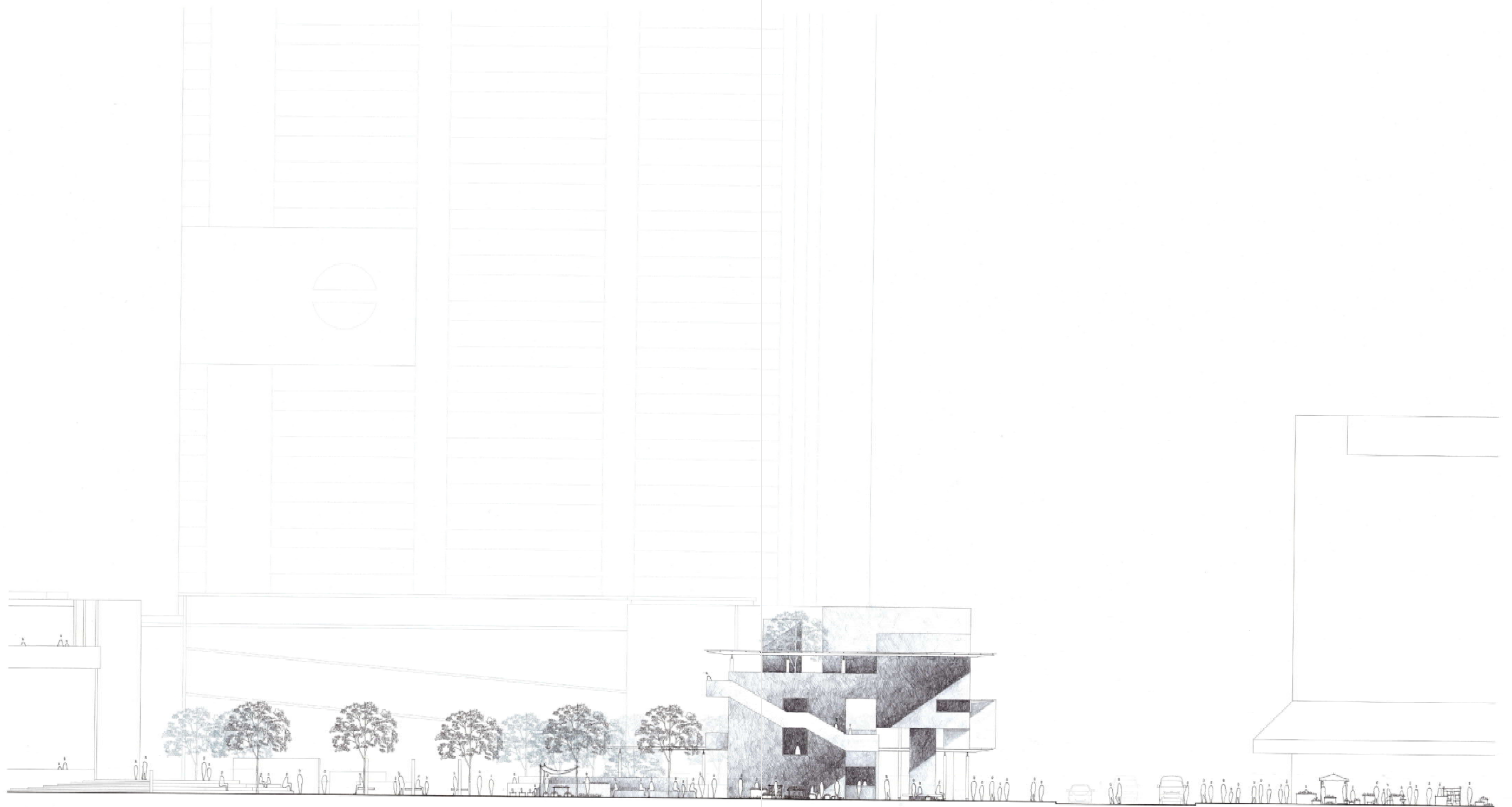
North Elevation

Not to scale

The north elevation serves as a landmark along the Ceremonial Boulevard, announcing the entrance to the Civic Precinct. The corner is elevated to invite pedestrians into the informal market space and through to Lilian Ngoyi Square.

50. North elevation (Author 2021)
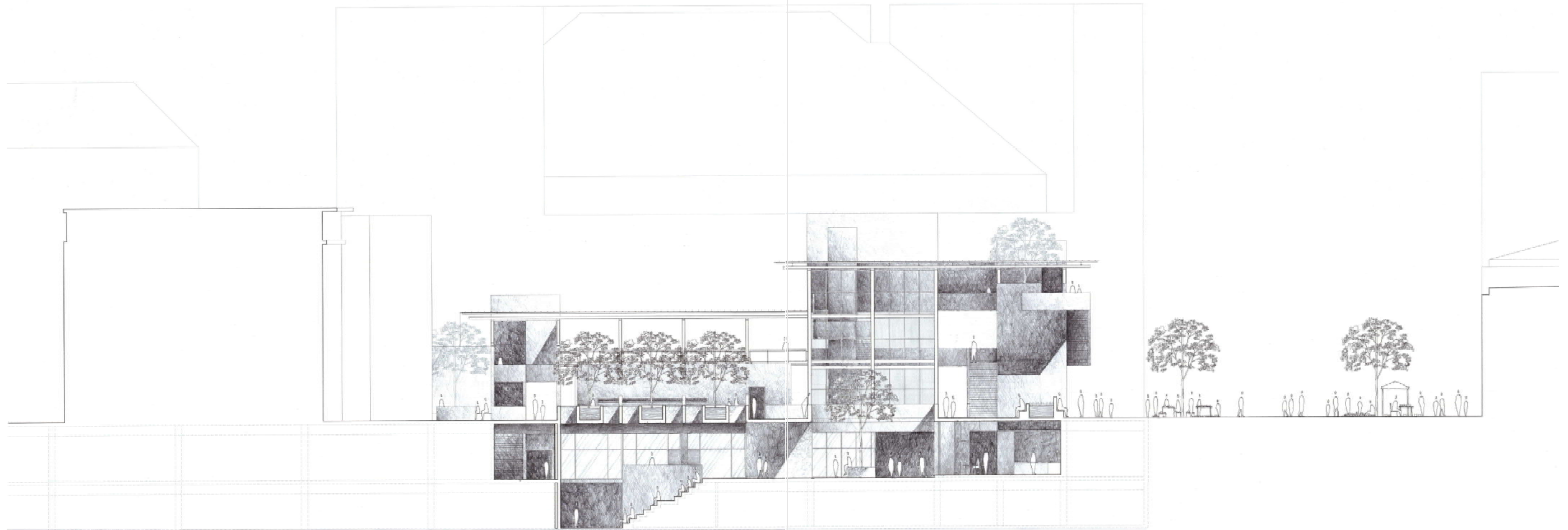
East Elevation

Not to scale

The east elevation provides respite from the activity surrounding the site and shelter from the surrounding precinct's monumental scale. The intervention is visually and physically permeable along this edge, creating connection with Lilian Ngoyi Square and the Women's Living Heritage Monument.

51. East elevation (Author 2021)

52. West approach (Author 2021)

53. North approach (Author 2021)

54. East approach (Author 2021)
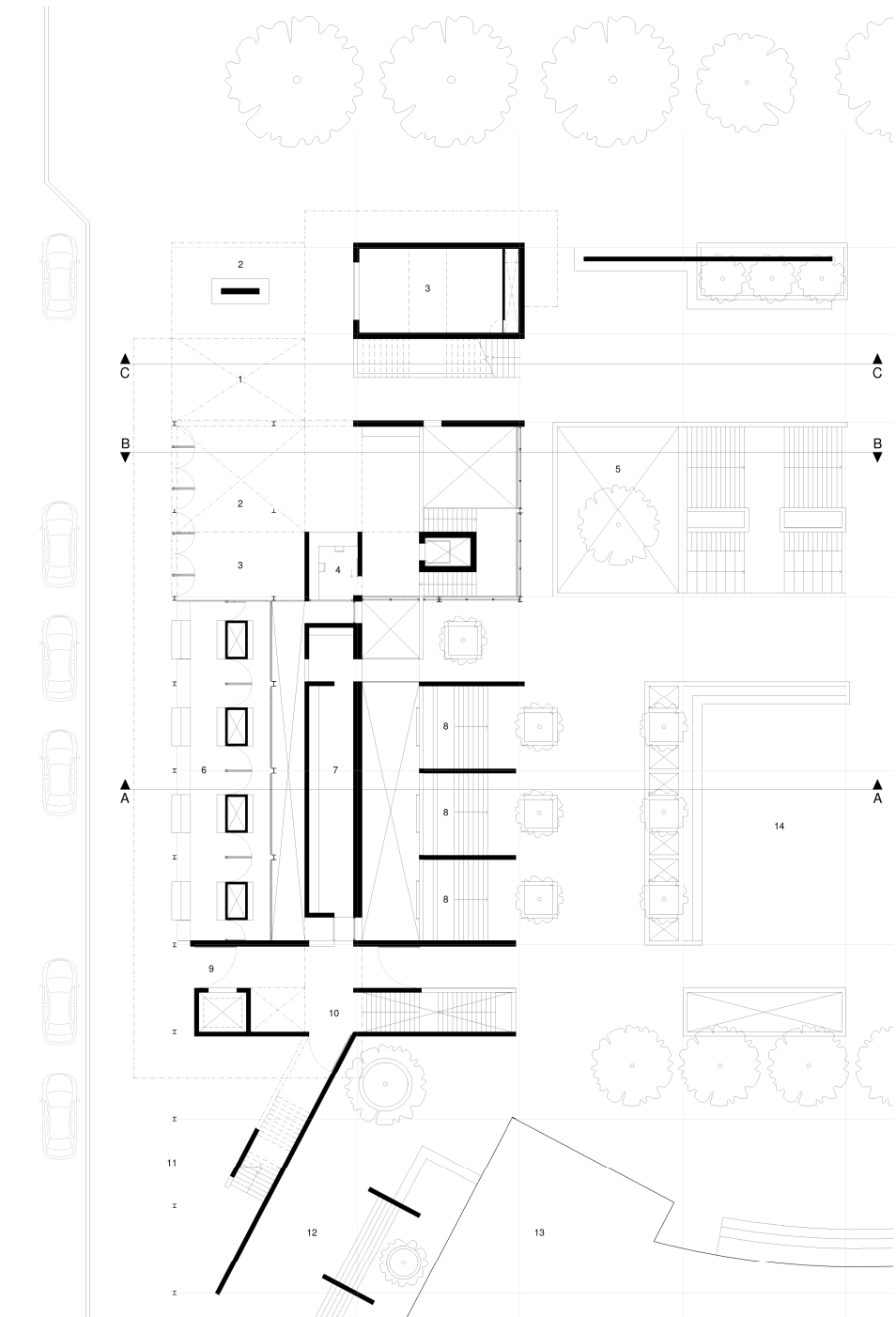
Ground Floor Plan

Not to scale

N

1. Main entrance
2. Market space
3. Trader storage
4. Security station
5. Subterranean entrance
6. Trader stalls
7. Memorial

8. Memorial gardens
9. Secondary entrance
10. Basement link
11. Informal trade space
12. Pause space
13. Existing public ablutions
14. Performance space

55. Ground Floor Plan (Author 2021)
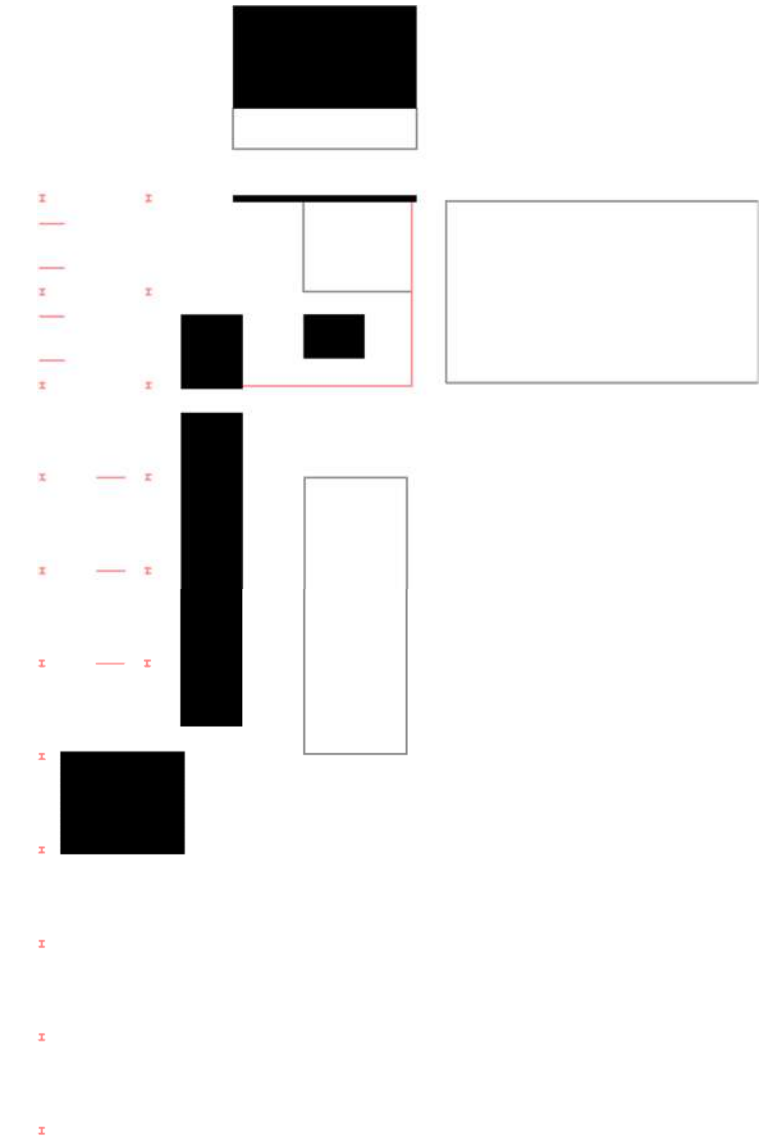
Surface

Monolith

Veil

56. Ground Floor conceptual layering (Author 2021)
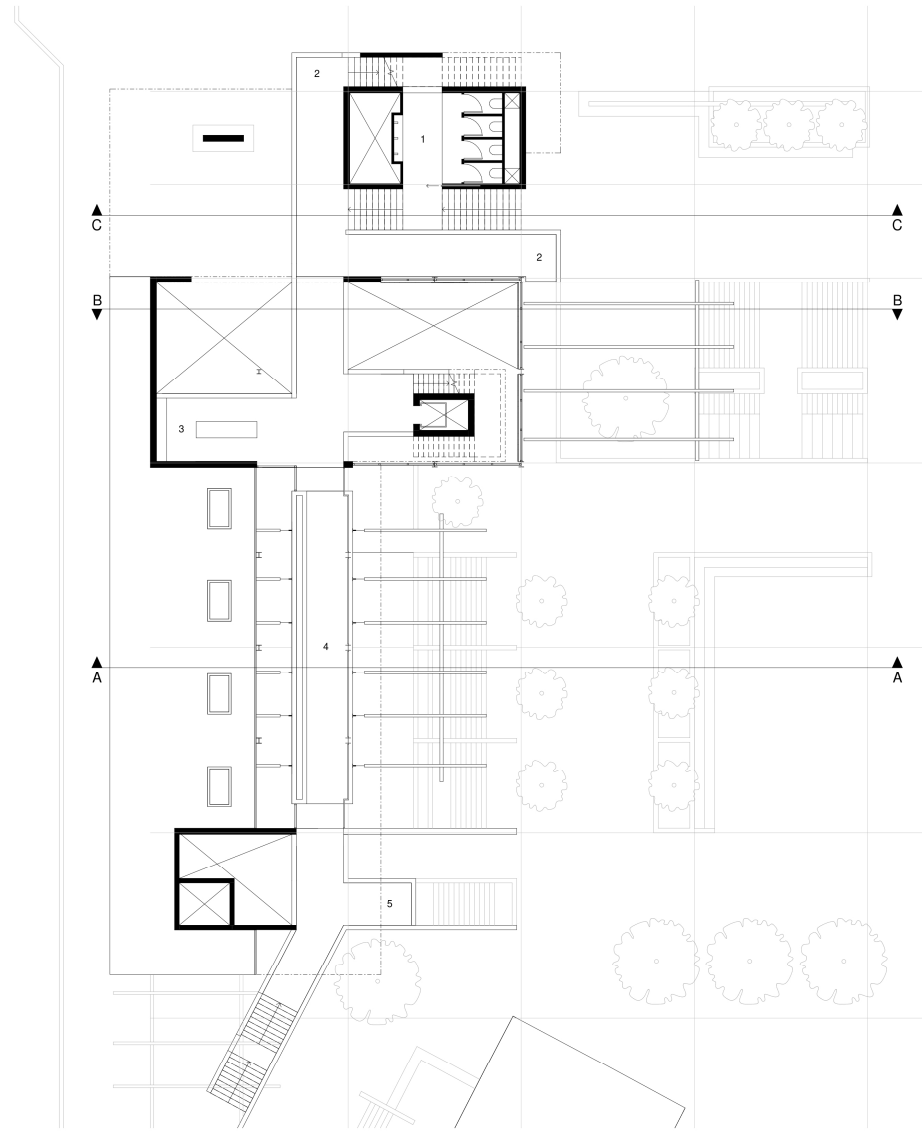
First Floor Plan

$\underset{N}{\displaystyle +}$

Not to scale

1. Trader ablutions
2. Speaker's podiums
3. Trader rest space
4. Memorial walkway
5. Viewpoint

57. First Floor Plan (Author 2021)
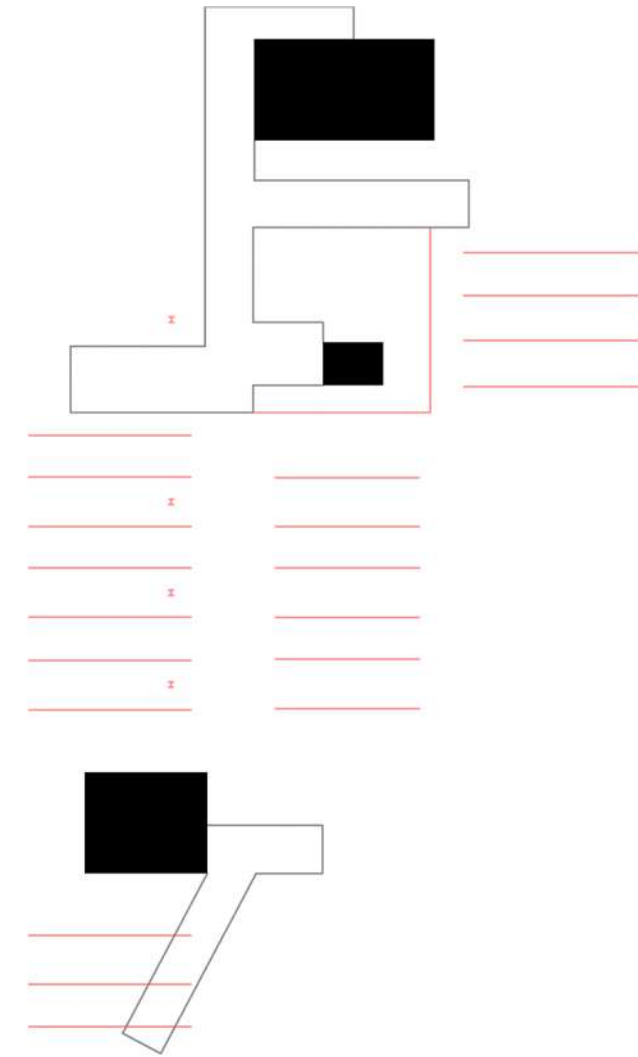
Surface
Monolith
Veil

58. First Floor conceptual layering (Author 2021)
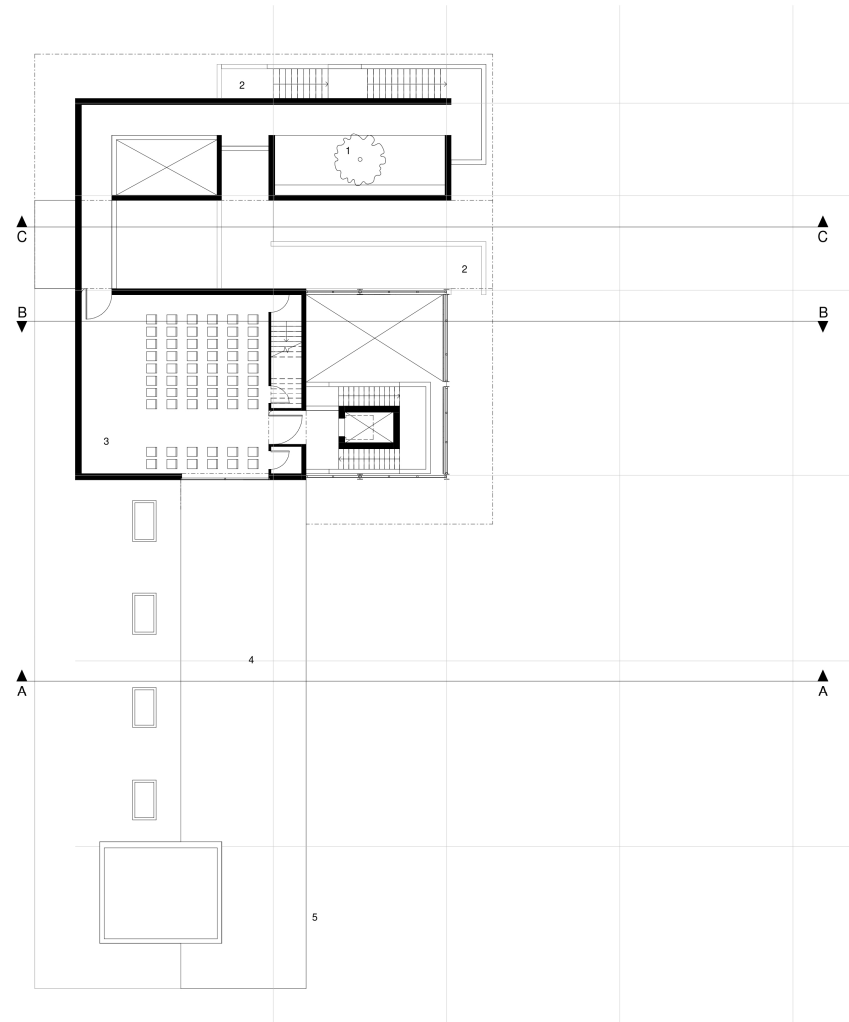
Second Floor Plan

Not to scale

N

1. Viewpoint
2. Roof garden
3. Exhibition space
4. Viewpoint
5. Event space
6. Storage
7. Viewpoint

59. Second Floor Plan (Author 2021)
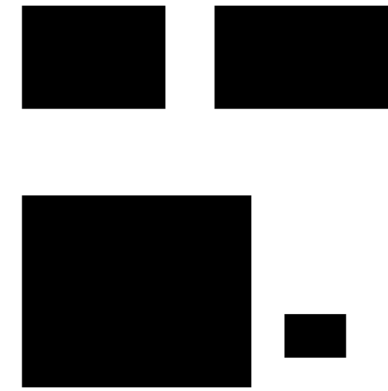
Surface

Monolith

Veil

60. Second Floor conceptual layering (Author 2021)
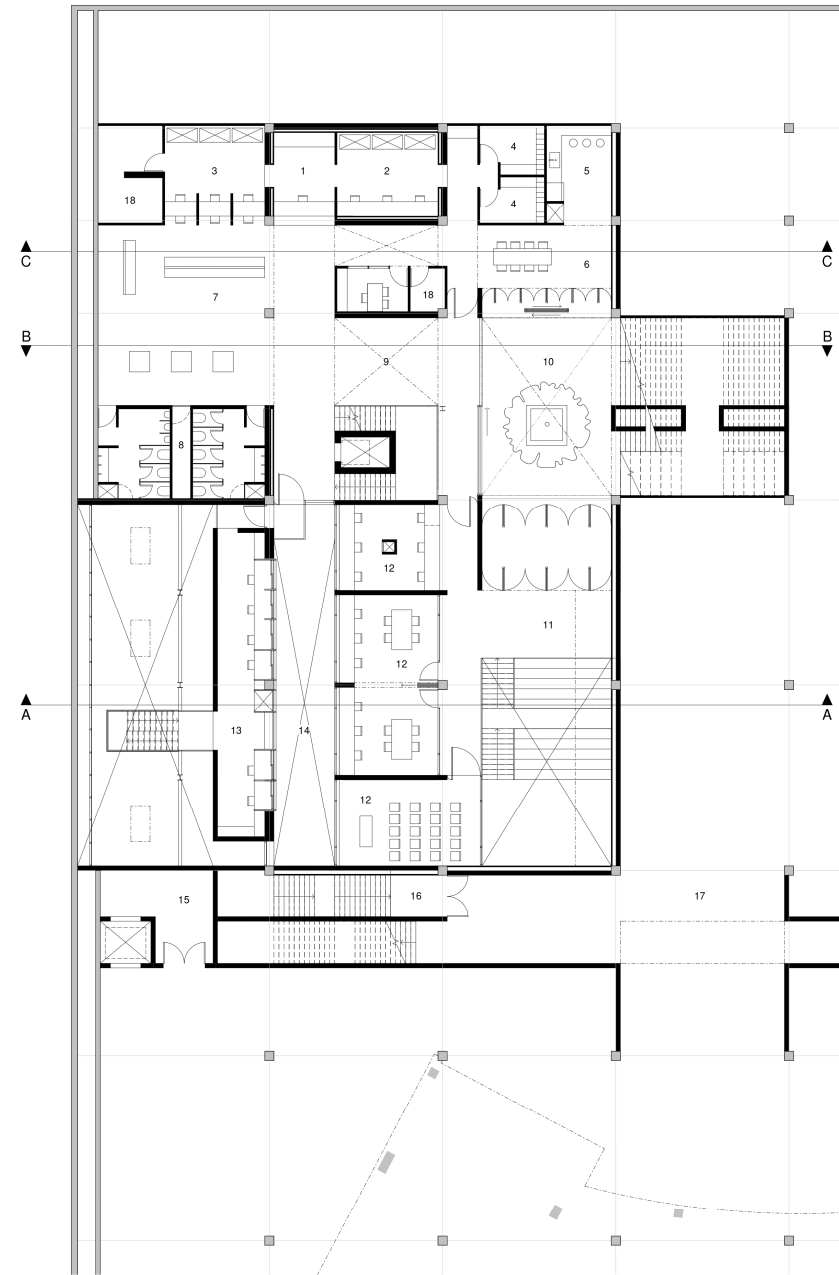
-1 Floor Plan

Not to scale

1. Reception	10. Outdoor courtyard
2. Administration	11. Seminar space
3. Permit office	12. Meeting spaces
4. Staff change rooms	13. Maker work stations
5. Staff kitchenette	14. Outdoor atrium
6. Staff rest space	15. Service area
7. Public waiting space	16. Fire escape
8. Toilets	17. Basement link
9. Atrium	18. Storage

61. Basement 1 Floor Plan (Author 2021)
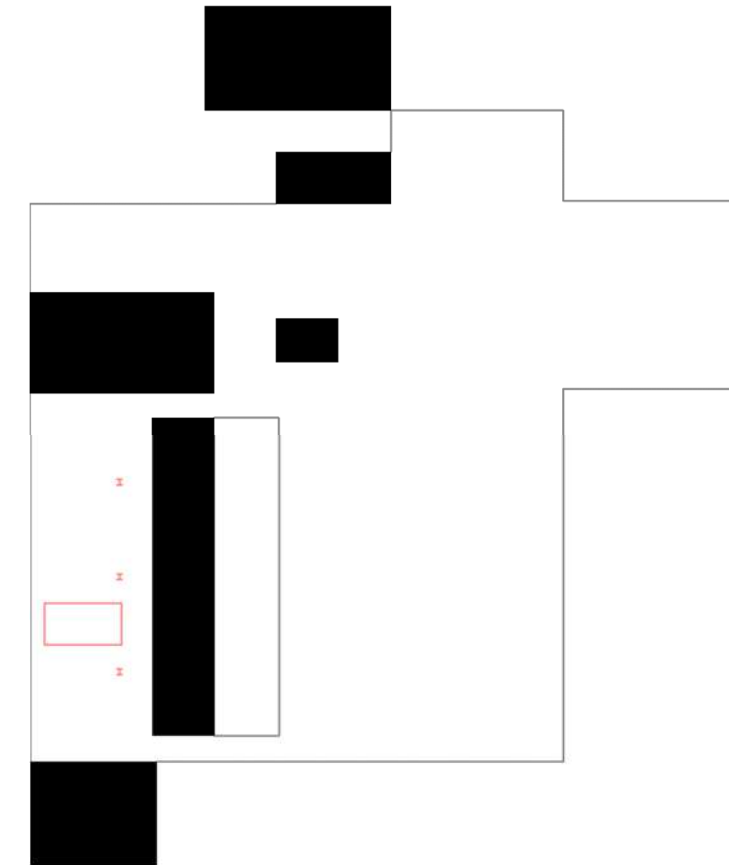
Surface

Monolith

Veil

62. Basement 1 conceptual layering (Author 2021)
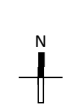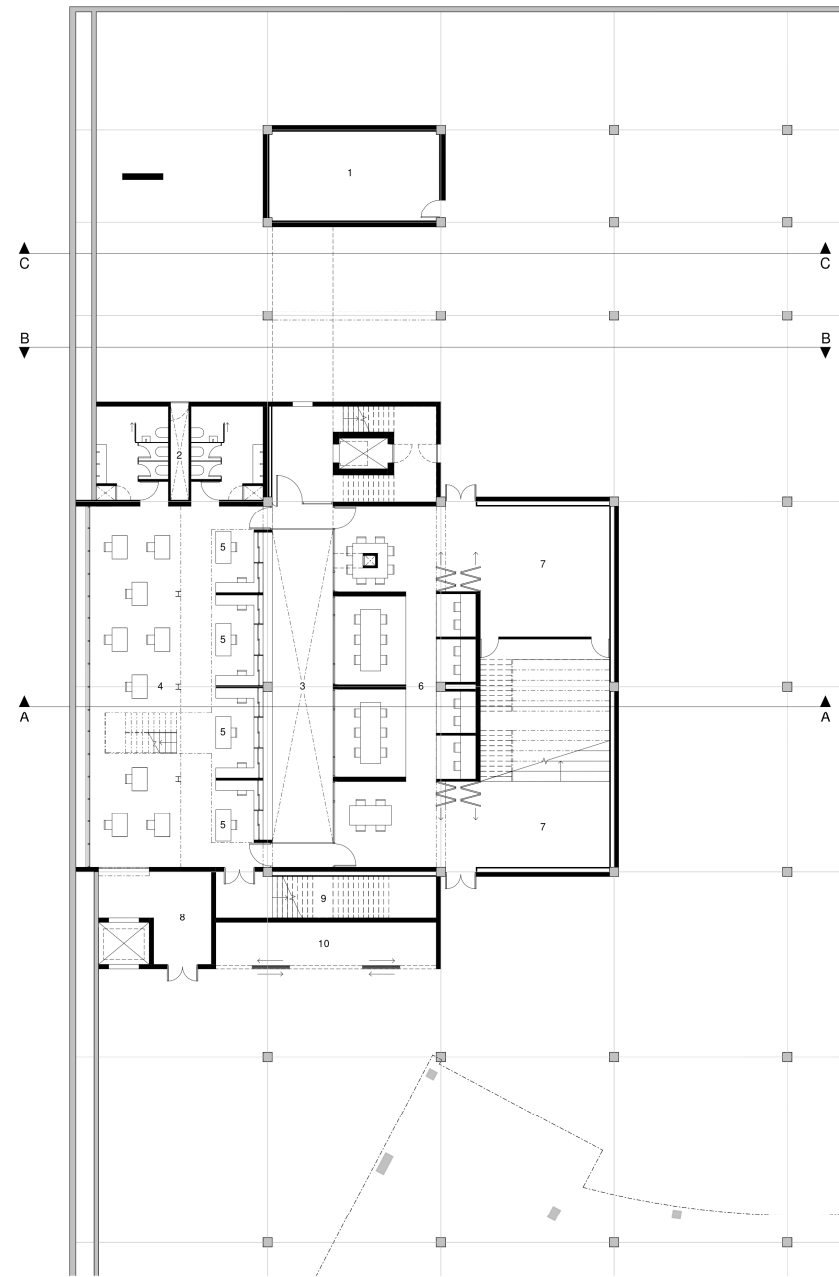
-2 Floor Plan

Not to scale

1. Pump room	6. Communal workshop
2. Toilets	7. Seminar spaces
3. Water furrow	8. Service area
4. Textile workshop	9. Fire escape
5. Sewing stations	10. Material storage

63. Basement 2 Floor Plan (Author 2021)
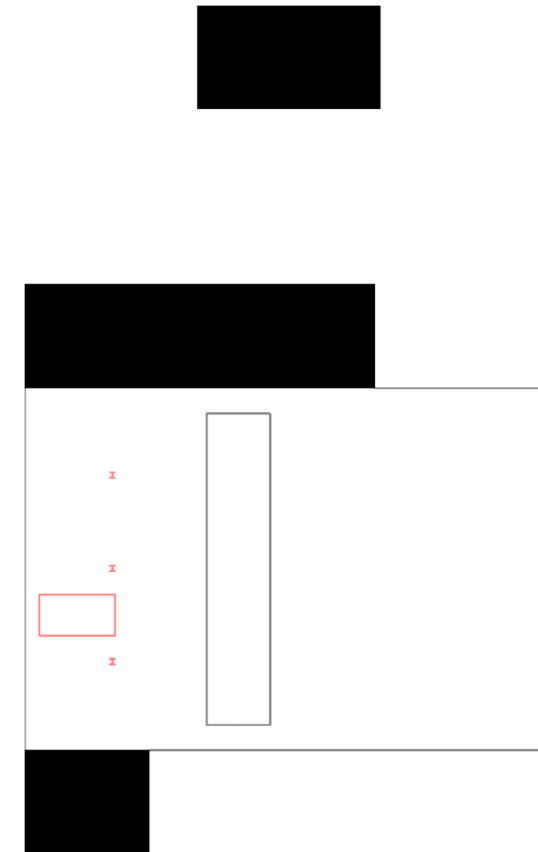
Surface

Monolith

Veil

64. Basement 2 conceptual layering (Author 2021)

65. Scale model (Author 2021)
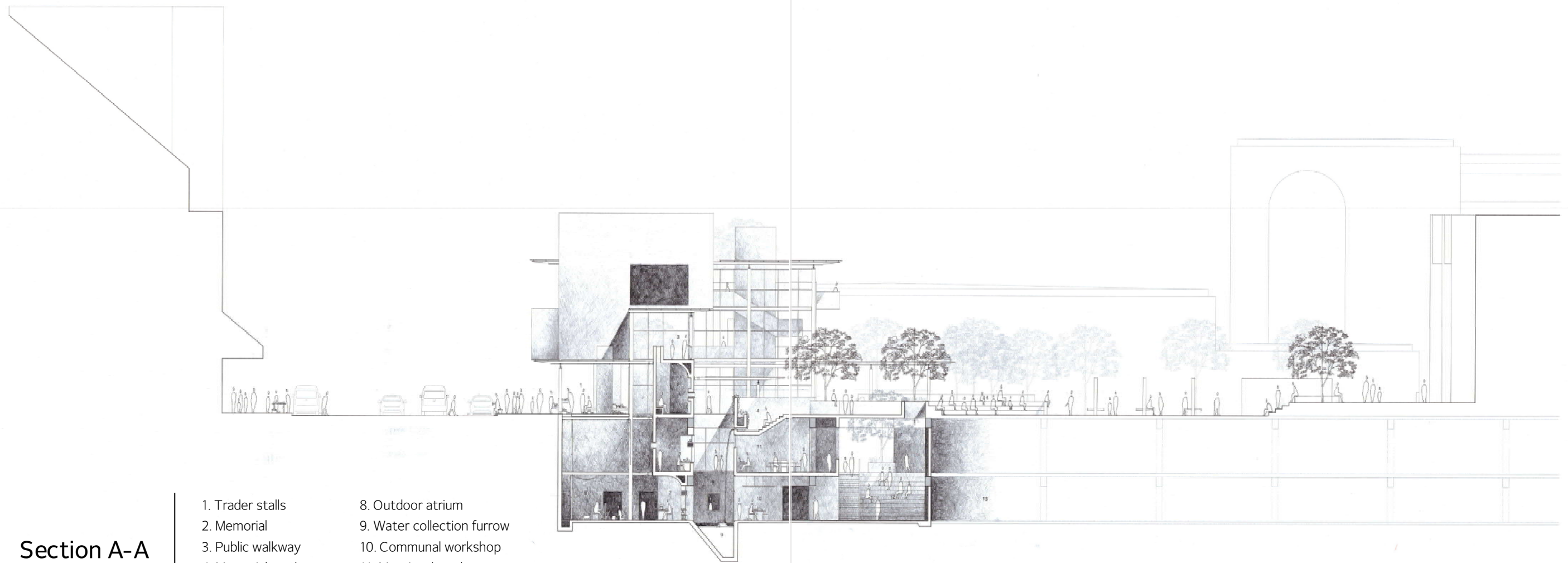
Section A-A

Not to scale

1. Trader stalls	8. Outdoor atrium
2. Memorial	9. Water collection furrow
3. Public walkway	10. Communal workshop
4. Memorial gardens	11. Meeting / study space
5. Maker work stations	12. Seminar space
6. Textile workshop	13. Existing basement
7. Sewing stations	14. Public gathering space

66. Section A-A (Author 2021)

67. Workshop (Author 2021)

68. Walkway (Author 2021)

69. Refuge (Author 2021)
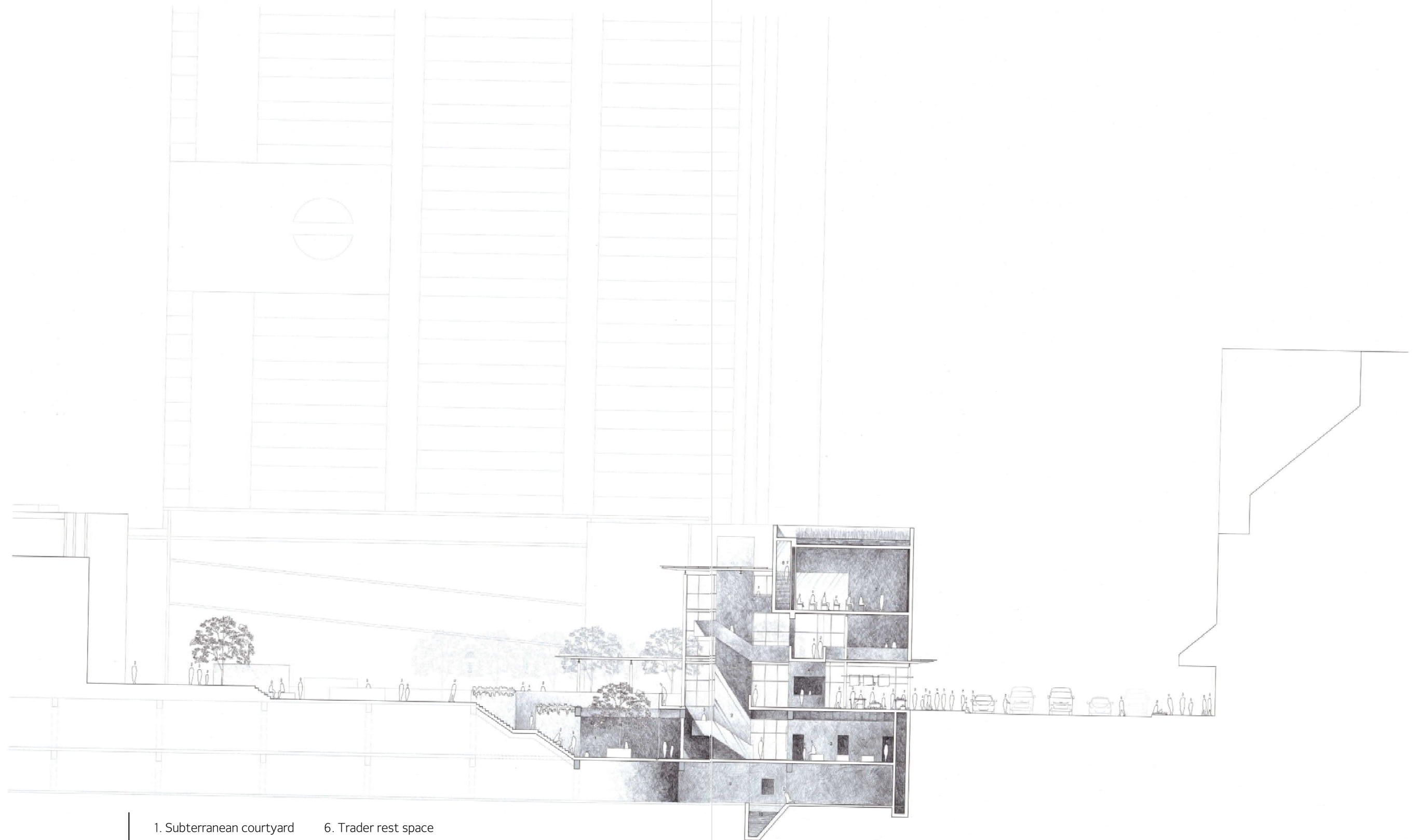
Section B-B

Not to scale

1. Subterranean courtyard	6. Trader rest space
2. Atrium	7. Event space
3. Toilets and waiting space	8. Rooftop maintenance access
4. Security station	9. Existing basement
5. Temporary market space	10. Stormwater filter

70. Section B-B (Author 2021)

71. Atrium descent (Author 2021)

72. Atrium ascent (Author 2021)
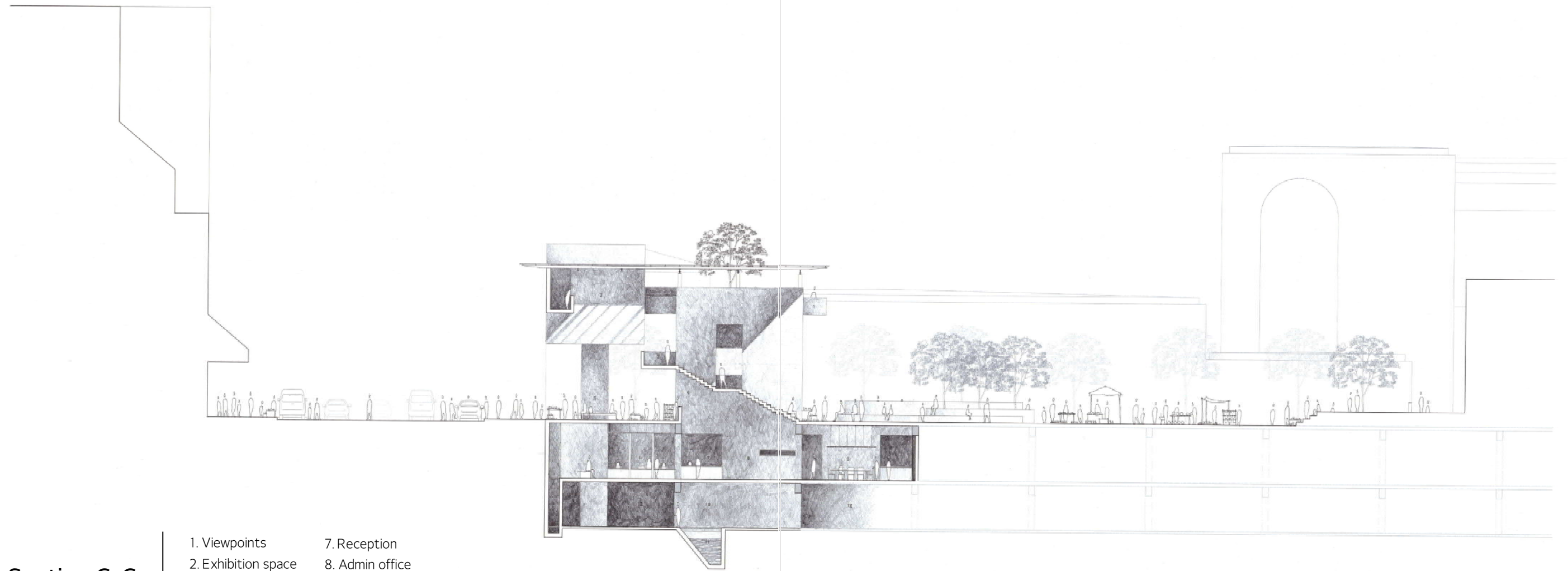
Section C-C

Not to scale

1. Viewpoints
2. Exhibition space
3. Speaker's podium
4. Trader storage
5. Corner entrance
6. Permit office
7. Reception
8. Admin office
9. Staff rest space
10. Pump room
11. Stormwater filter
12. Existing basement

73. Section C-C (Author 2021)
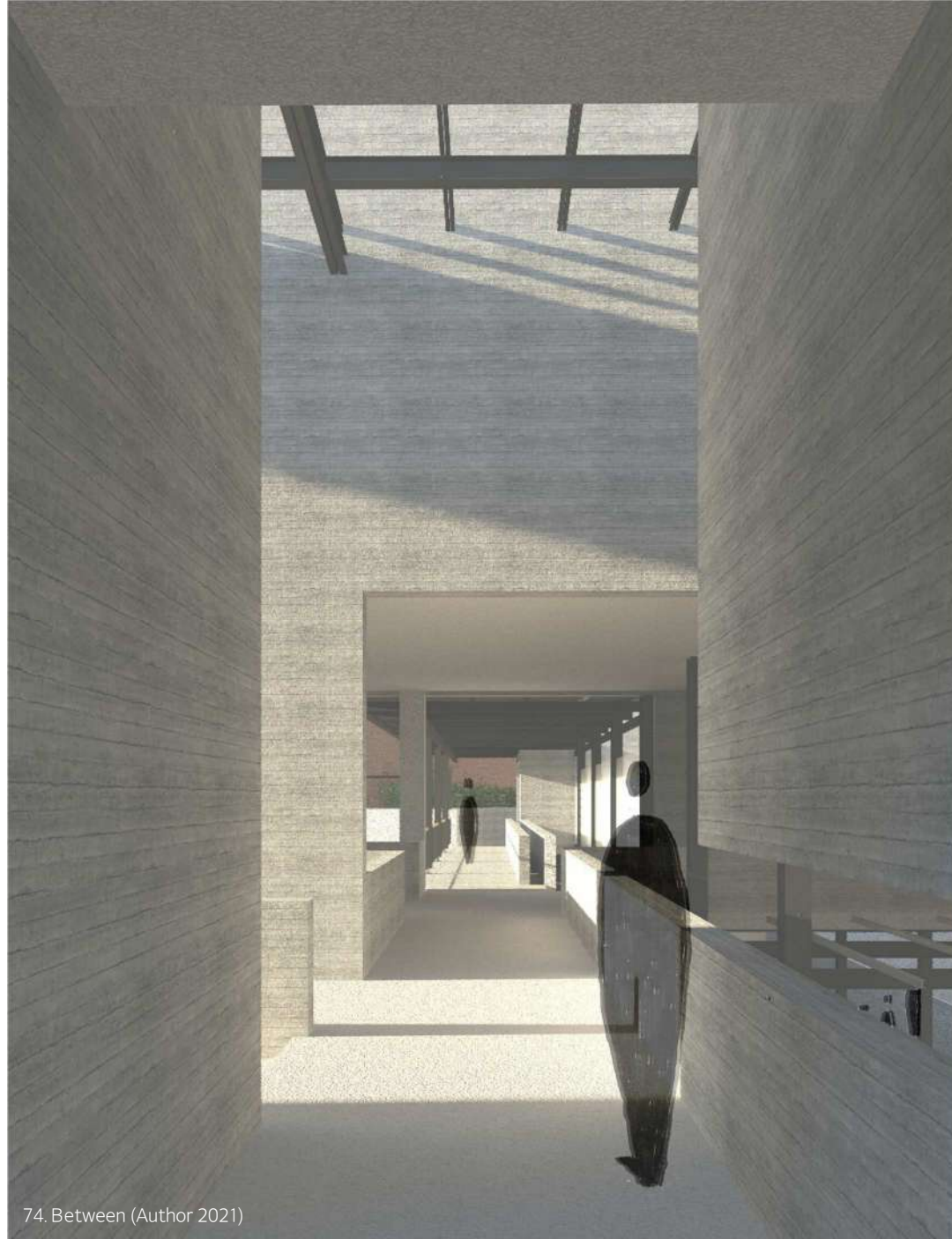
74. Between (Author 2021)

75. Podium (Author 2021)
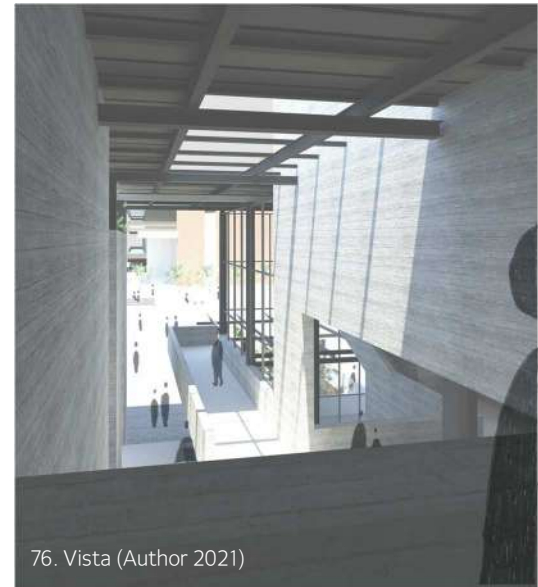
76. Vista (Author 2021)
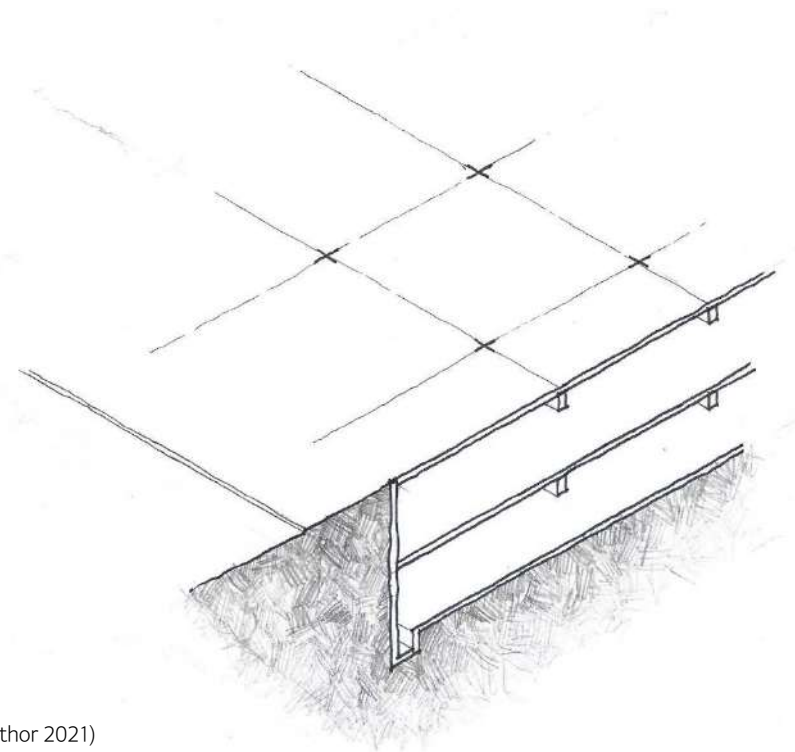
77. Basement (Author 2021)

78. Surface (Author 2021)

Technological concept

Extending the design concept, the intervention's technological articulation is based on several layers (Figure 77-81) which interact with one another to create opportunities for diverse appropriation and inhabitation. Interventions include the manipulation of existing surfaces, insertions within the existing structural system, and attachment of new structural systems. Each of these layers is related to specific conceptual intentions and are, therefore, individually articulated. Surface manipulation responds to the site's history and its current role as an urban public space. The insertion of monolithic objects allows the reinterpretation of traditional monumental form, subverted by separation from the ground and temporal inhabitation. A frame structure acts as a veil, mediating the previous layers, providing numerous possibilities to accommodate everyday urban activities within and around them.
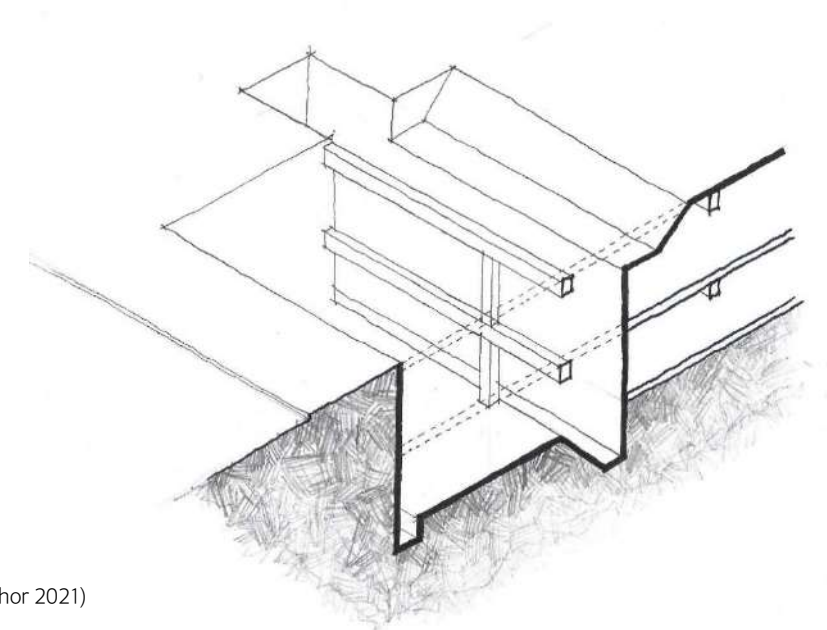
Surface

The first layer of intervention is the manipulation of the square's existing surface. Portions of the existing concrete slabs, relating to the square's historical collapse, will be removed, while retaining the existing concrete column and beam structure. New concrete and glass structures will be added to extend the surface of the square beyond its edge, into the new void. This serves as a counter-monumental response to traditional monumental form and scale. The surface will help define intimate, sheltered spaces along the interior edge of the square and imply connection between the activities occurring above and below street level. Additionally, the low point of this intervention will serve as a collection point for stormwater, creating further connection between the square and subterranean spaces.
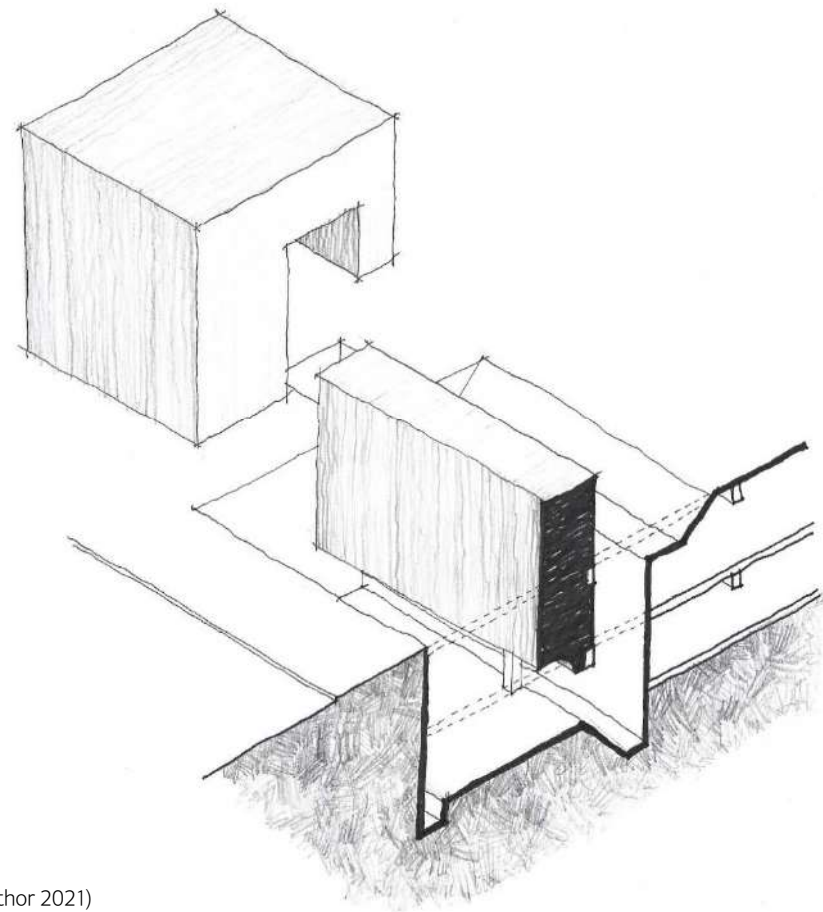
79. Monolith (Author 2021)

80. Veil (Author 2021)

Monolith

This layer concerns the insertion of new monumental objects within and above the existing basements. The monoliths are reinforced concrete forms which will be integrated with the existing columns and beams, with additional support where required. They are articulated as "floating" objects, denying them connection to the ground, thereby subverting traditional expressions of permanence or inherent connection to place. The monoliths will accommodate programmatic, spatial, and visual changes over time, using the expression of temporality to further challenge the static nature implied by their monumental articulation. Ultimately, these interventions act as a reconsideration of traditional monumental forms, exploring temporal inhabitation of seemingly static edifices.
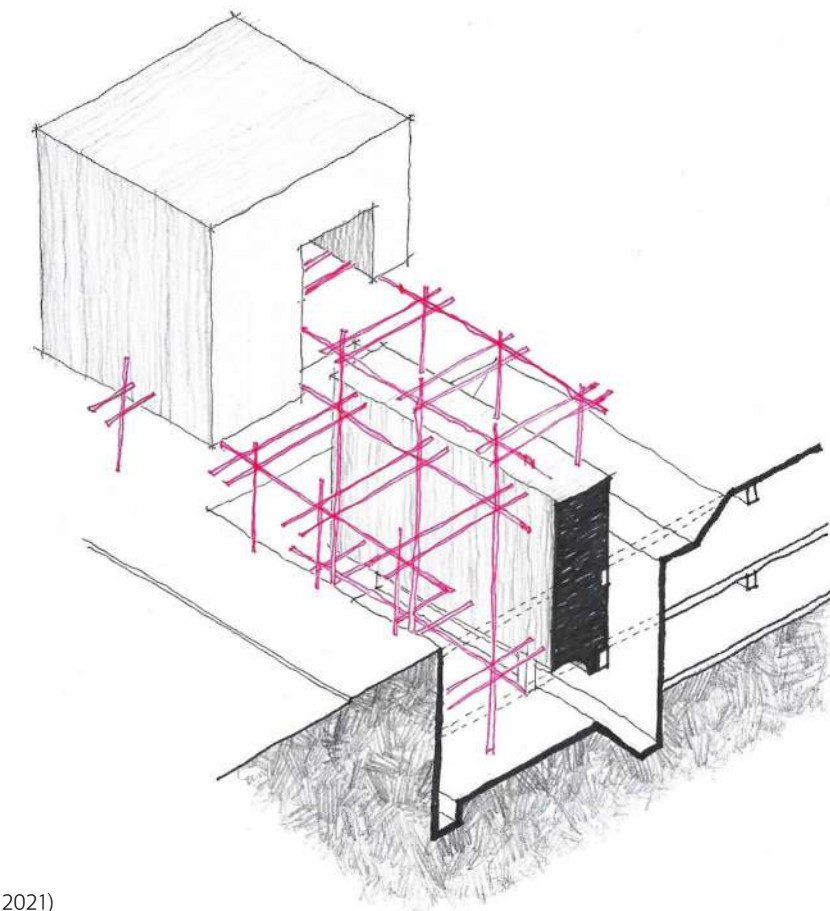
Veil

The veil is a new steel structure which attaches to both the surface and monolith layers. This structure acts as a mediator between the previous layers, new and old, inside and outside, and above and below. The veil supports several secondary structures including floors, walls, and roofs, creating a robust framework which allows flexibility in material use and potential for future change. This layer further explores the accommodation and expression of temporality through the use of translucent materials and operable elements, which change the appearance and spatial articulation of the intervention depending on its use at specific times.

Veil

Painted steel

Standing seam roof sheeting

Cellular polycarbonate sheeting

Translucent FRP grating

Board marked concrete

Monolith

Smooth off shutter concrete

Low-gloss polished concrete flooring

SA pine cladding

Rhinowood

Surface

Smooth off shutter concrete

Existing brick pavers

Existing paving blocks

Existing concrete basement flooring
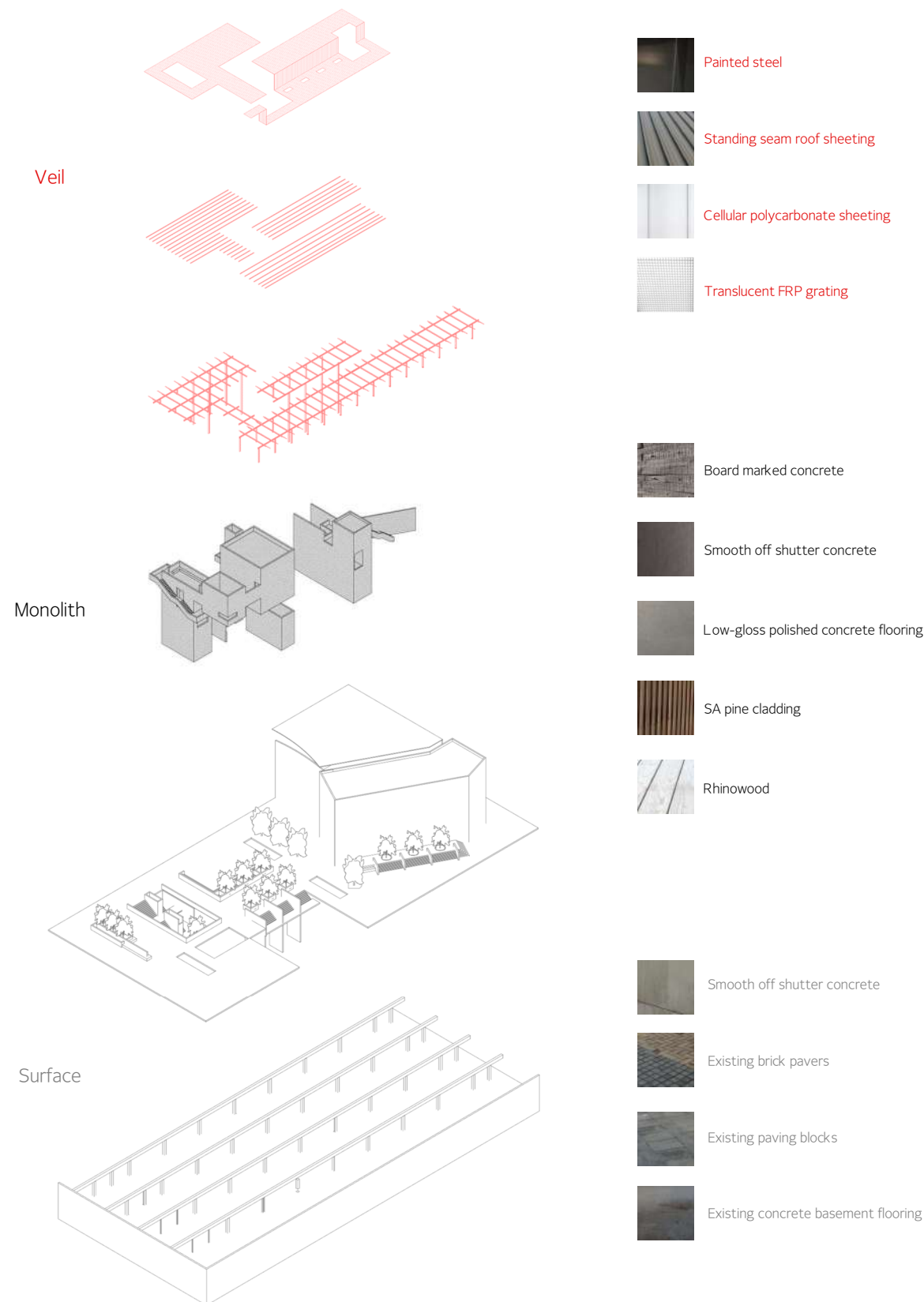
81. Structural layering (Author 2021)

Synthesis and resolution

Devolving the technological concept and overall structural system, the resolution of the scheme is elucidated by a detailed section through the workshop, trade stall, and meeting spaces (Figure 82). This section represents a synthesised response to the project's informants and highlights the interactions of key technologies.

As the new intervention inhabits the site's existing basement structure, the combination and expression of new and old technologies must be carefully considered. The addition of new insertions requires the removal of existing floor slabs, and thereby the removal of loading from the existing structure. To account for this, the beams in the structural bays adjacent to new openings will be reinforced with steel plates to address the larger bending moment imposed on them. The existing surface bed will be retained as far as possible, with breaking and excavation only occurring for the insertion of new foundations, column footings, and the new water furrow. Following the removal of floor slabs and construction of new structural elements, the monolith structure will be cast in-situ, tied into the existing columns and beams. This structure will also be supported by perpendicular shear walls to reduce strain on the existing structure. This will allow the attachment of the new steel veil structure and the structures it supports.

The resolution of structural issues will be explained through a series of detail explorations considering materiality, junctions, experience, and conceptual expression. In addition to structural issues, however, the subterranean nature of the architecture requires the resolution of a water management system, considering both stormwater and groundwater from the high water table of the CBD, and lighting strategies to illuminate underground spaces. These will be undertaken through system diagrams, calculations, and simulations where applicable.

Labels (left):
- 0.5mm thick aluminium-zinc coated steel standing seam roof sheeting, at 1 degree fall, fixed to purlins with concealed fixing clips
- 203 x 133mm painted structural steel beam welded to parallel flange channel girders
- 200 x 75mm painted structural steel parallel flange channel girder fixed to column as per assembly drawing
- Natural anodised aluminium louvred ventilation grille fixed between steel girders with aluminium brackets
- 8mm thick DanPal translucent polycarbonate facade panel fixed to natural anodised aluminium frame
- 50mm deep transparent moulded fibreglass reinforced plastic grating fixed to steel angle frame with manufacturer supplied fixing clips
- 0.5mm thick aluminium-zinc coated steel standing seam roof sheeting, at 1 degree fall, fixed to purlins with concealed fixing clips
- 76 x 38mm painted steel c-channel purlins bolted to steel plate cleat at max. 1200mm centres
- 203 x 133mm painted structural steel beam welded to parallel flange channel girders
- 200 x 75mm painted structural steel parallel flange channel girder fixed to column as per assembly drawing
- 203 x 203mm painted structural steel H column welded to structural steel footing as per detail
- 220 x 108 x 50mm graphite clay brick paver embedded in finishing screed
- 150mm reinforced precast concrete hollowcore slab
- 33mm thick non-slip coated trafficable glazing in aluminium frame as per detail
- Precast concrete drainage channel with galvanised steel slot drain as per detail
- 220 x 108 x 50mm graphite clay brick paver, to match existing, laid on 30mm sand setting bed
- Compacted fill compacted in layers of 150mm
- Rhinowood window and furniture as per detail
- Rhinowood reveal screwed to unplaned timber ground, bolted to concrete wall
- 220mm thick in-situ board marked reinforced concrete wall
- 22mm thick engineered hardwood floor finish tongue and groove jointed
- min. 40mm cement sand leveling screed cast over concrete floor slab
- 255mm thick in-situ board marked reinforced concrete floor slab tied into existing concrete beam as per engineer's specifications
- 200 x 75mm painted structural steel parallel flange channel girder fixed to column as per assembly drawing
- 203 x 133mm painted structural steel universal beam bolted to equal angle support
- 200 x 200 x 15mm painted structural steel equal angle support chemically anchored to existing concrete retaining wall
- Unfinished Rhinowood shelving and window frames
- 220mm plastered and painted clay brick load bearing wall on new strip foundation
- 8mm thick DanPal translucent polycarbonate screen wall fixed to natural anodised aluminium frame
- 254 x 254mm painted structural steel H-column welded to base plate
- 254 x 254mm painted structural steel base plate anchored to reinforced concrete column footing
- In-situ reinforced concrete column footing to engineer's specification
- Existing reinforced concrete surface bed
- Galvanised steel grating trench cover supported by steel angles bolted to existing concrete retaining wall and surface bed
- Existing no-fines concrete base for groundwater infiltration
- Existing off shutter reinforced concrete retaining wall and footing
- Existing polyolefin damp proof membrane between no-fines concrete base and surface bed, to be wrapped between timber ground and window frame
- 300mm thick smooth off shutter in-situ reinforced concrete water channel with waterproofing additive

Labels (right):
- 203 x 203mm painted structural steel H column bolted to structural steel angle footing, welded to structural steel coping
- Min. 40mm cement sand finishing screed cast over waterproofing membrane
- Bituminous torch-on waterproofing membrane applied to leveling screed, wrapped over parapet, covered with painted steel coping, and sealed with polyurethane sealant
- Min. 40mm cement sand leveling screed to fall
- Rhinowood reveal screwed to unplaned timber ground, anchored to concrete wall
- 203 x 133mm painted structural steel beam welded to parallel flange channel girders
- 200 x 75mm painted structural steel parallel flange channel girder fixed to column as per assembly drawing
- 203 x 203mm painted structural steel H column welded to structural steel footing, bolted to reinforced concrete wall
- Corten steel water spout/coping anchored to reinforced concrete floor slab upstand
- Bituminous torch-on waterproofing membrane applied to concrete slab, wrapped underneath water spout and sealed with polyurethane sealant
- 220 x 108 x 50mm graphite clay brick paver, to match existing, laid on 30mm sand setting bed
- Bituminous torch-on waterproofing membrane applied to concrete slab, wrapped into groove around planter and sealed with polyurethane sealant
- 255mm smooth off-shutter reinforced concrete floor slab
- 1000mm deep smooth off-shutter reinforced concrete planter with growing medium, waterproofing, and drainage layer as per landscape architect's specification
- 220mm wide smooth off-shutter reinforced concrete beam
- 38 x 114mm unplaned SA pine brandering anchored to concrete beam
- 12mm gypsum plasterboard ceiling nailed to timber brandering
- Natural anodised aluminium framed curtain wall system, with safety glazing up to 2100mm from FFL, anchored to reinforced concrete surface bed
- Existing off-shutter reinforced concrete beam
- Min. 50mm cement sand finishing screed cast on concrete floor slab
- 255mm smooth off-shutter reinforced concrete floor slab
- Slatted timber ceiling fixed to unplaned SA pine frame
- 38 x 39mm unplaned SA pine brandering screwed to timber studs through wall panel
- 38 x 76mm unplaned SA pine brace fixed between studs
- Slatted timber acoustic wall panel fixed to timber studs
- Acoustic batt insulation between studs
- 22mm thick engineered hardwood floor finish tongue and groove jointed
- Min. 30mm self levelling screed cast over existing surface bed
- 38 x 114mm unplaned SA pine timber ground anchored to surface bed
- Min. 50mm cement sand finishing screed cast on existing surface bed
- Existing reinforced concrete surface bed
- Existing polyolefin damp proof membrane between no-fines concrete base and surface bed, to be wrapped underneath new aluminium window frame
- Existing no-fines concrete base for groundwater infiltration
- Slatted timber ceiling suspended from reinforced concrete soffit with stainless steel cables and anchors
- Natural anodised aluminium framed curtain wall system, with safety glazing up to 2100mm from FFL, anchored to reinforced concrete surface bed
- 300mm thick smooth off shutter reinforced concrete retaining wall cast in-situ in front of gunite stabilised earth

Room labels: Public walkway · Trader stalls · Wit Wolf Massacre Memorial · Work stations · Memorial Garden · Meeting and study room · Textile workshop · Sewing stations · Outdoor Atrium · Communal workshop · Water collection furrow

Technical Section A-A

Not to scale

82. Technical Section (Author 2021)

83. Detail 1 development (Author 2021)

84. Detail 1 axonometric (Author 2021)

Detail 1 | Surface

The first detail exploration (Figure 83-85) deals with the junction between an existing concrete retaining wall (surface), a new precast concrete floor slab and its supporting structure (veil), and the sidewalk. The concrete retaining wall is exposed to release the surface that wraps from the interior of the square to the street and define the transition from sidewalk to trade space. The use of the same clay brick pavers present on the sidewalk within the trader stalls implies extension of the public realm despite the articulated edge. A strip of trafficable glazing further defines the transition, creates distinction between new and old, illuminates the basement structure below, exposes the steel frame structure which supports the new floor slab, and creates a visual connection between the street and subterranean textile workshop while creating a physically continuous surface.

203 x 203mm painted structural steel H column
welded to 203 x 203 x 15mm base plate

203 x 203 x 15mm painted structural steel
base plate welded to fin plates

120 x 94 x 15mm painted structural steel fin
plate welded to 300 x 300 x 15mm base plate
and 203 x 122 x 15mm fin plate

203 x 122 x 10mm painted structural steel fin plate
welded to 300 x 300 x 15mm base plate

300 x 300 x 15mm painted structural steel
base plate fixed to anchor rods with M16
galvanised steel washers and nuts

M16 galvanised steel threaded rod chemically
anchored to existing concrete retaining wall

M16 galvanised steel spacer nut to
level base plate on anchor rods

235 x 105 x 1000mm galvanised steel brickslot grating

235 x 235 x 1000mm precast concrete drainage channel

220 x 108 x 50mm charcoal precast
concrete paver laid on sand setting bed

30mm sand setting bed

Compacted hardcore fill compacted in layers of 150mm

Existing off shutter reinforced concrete retaining wall

Aluminium frame sealed around glazing with
silicone sealant and separated from steel
angle iron support with plastic spacers

Plastic spacer between aluminium
glazing frame and steel angle support

50 x 30 x 6mm painted structural steel unequal angle fixed
to anchor rod with M10 galvanised steel washer and nut

M10 galvanised steel threaded anchor rod chemically
anchored to existing concrete retaining wall

33mm thick non-slip coated trafficable glazing fixed
to aluminium frame with structural silicone and
sealed around edges with silicone sealant

Aluminium frame sealed around glazing with silicone
sealant and separated from steel angle iron support
with plastic spacers

40 x 40 x 4mm painted structural steel equal angle
welded to 100 x 65 x 8mm angle

80 x 60 x 8mm painted structural steel unequal angle
anchored to hollow-core slab with M10 expansion anchors

220 x 108 x 50mm graphite clay brick paver embedded in
finishing screed with mortar joints

Bituminous torch on waterproofing membrane applied
to surface of structural screed, wrapped over steel
angle edging and sealed with polyurethane sealant

min. 40mm in-situ structural screed cast over
hollow-core slab with 1:70 fall to service core

150mm prestressed precast concrete hollow-core slab
supported by steel beam

203 x 133mm painted structural steel universal beam, with prewelded
shear studs, welded to 200 x 200 x 15mm equal angle support

M16 galvanised steel threaded anchor rod chemically
anchored to existing concrete retaining wall

M16 galvanised steel spacer nut to level angle on anchor rods

200 x 200 x 15mm painted structural steel equal angle fixed
to anchor rods with M16 galvanised steel washers and nuts

Detail Section 1

Not to scale

85. Detail 1 section (Author 2021)

87. Detail 2 axonometric (Author 2021)

86. Detail 2 development (Author 2021)

Detail 2 | Monolith

The second detail (Figure 86-88) explores the inhabitation of concrete monoliths. In order to contrast the static, inhumane nature of new concrete insertions, timber is used for furniture, service ducts, and openings. Window reveals are exaggerated and separated with a shadow line to express timber elements as independent objects which "pierce" through the concrete. Rhinowood is used for its durability, local availability, and visual expression of change over time. As it weathers, Rhinowood forms a grey patina over its surface, which can be removed through cleaning, exposing the timber's natural colour once more. This cycle of change contrasts the static nature of the monumental object it inhabits, subverting its perceived separation from time. Additionally, external timber solar screens are manipulable, allowing each workspace inhabitant to adjust the type of natural light received within their station. This shifts autonomy from the monumental object to the inhabitant, while the movement of screens throughout the day provides another layer of visual change as light and shadow shift across the monolith's surface.

Existing off shutter reinforced concrete beam

220mm off shutter in-situ reinforced
concrete wall tied into existing concrete
beam as per engineer's specification

25 x 102mm unfinished SA pine ground
anchored to reinforced concrete wall with
galvanised steel expansion anchor

25 x 51mm unfinished Rhinowood ground
anchored to reinforced concrete wall with
galvanised steel expansion anchor

50mm thick unfinished Rhinowood window sill
screwed to timber grounds with galvanised steel
self-drilling countersunk timber screws

4mm clear glazing fitted in window frame and
secured with timber glazing beads

25mm thick unfinished Rhinowood removable duct
cover to rest on sub-frame and aluminium angle

50mm thick unfinished Rhinowood winow frame
screwed to window box with self-drilling countersunk
timber screws and sealed around edges with silicone

25 x 25 x 1,5mm aluminium angle screwed to window sill

50 x 228mm unfinished Rhinowood window sill
tongue and groove jointed to window reveal

25mm thick unfinished Rhinowood exterior panel
screwed to sub-frame from inside

38 x 38mm SA pine duct subframe screwed to external boards
from inside with self-drilling countersunk timber screws

38mm thick Rhinowood board tongue and groove
jointed to window reveal

4mm clear glazing fitted in window frame and
secured with timber glazing beads

50mm thick finished SA pine desk screwed to
timber ground with galvanised steel self-
drilling countersunk timber screws

12 x 60mm SA pine stationary holder made from off cuts

50 x 76mm unfinished Rhinowood window
frame with fixed and sliding sections as shown
screwed to window box with galvanised steel
self-drilling countersunk timber screws

38 x 50mm unfinished Rhinowood top-hung vertical
solar screen frame screwed to galvanised steel hinge
with galvanised steel self-drilling timber screws

50 x 228mm unfinished Rhinowood window sill
screwed to timber grounds with galvanised steel
self-drilling countersunk timber screws

25 x 102mm unfinished Rhinowood ground
anchored to reinforced concrete wall with
galvanised steel expansion anchor

25 x 102mm unfinished SA pine ground
anchored to reinforced concrete wall with
galvanised steel expansion anchor

220mm off shutter in-situ reinforced
concrete wall cast with opening as shown

min. 40mm cement sand leveling
screed cast over concrete floor slab

255mm off shutter in-situ reinforced concrete floor slab
tied into existing beam as per engineer's specification

Existing off shutter reinforced concrete beam
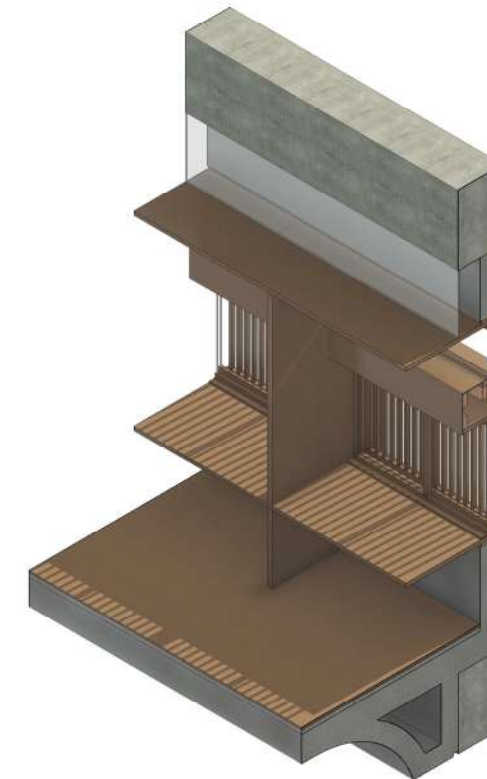
Detail Section 2

Not to scale

88. Detail 2 section (Author 2021)

89. Detail 3 development (Author 2021)

90. Detail 3 axonometric (Author 2021)

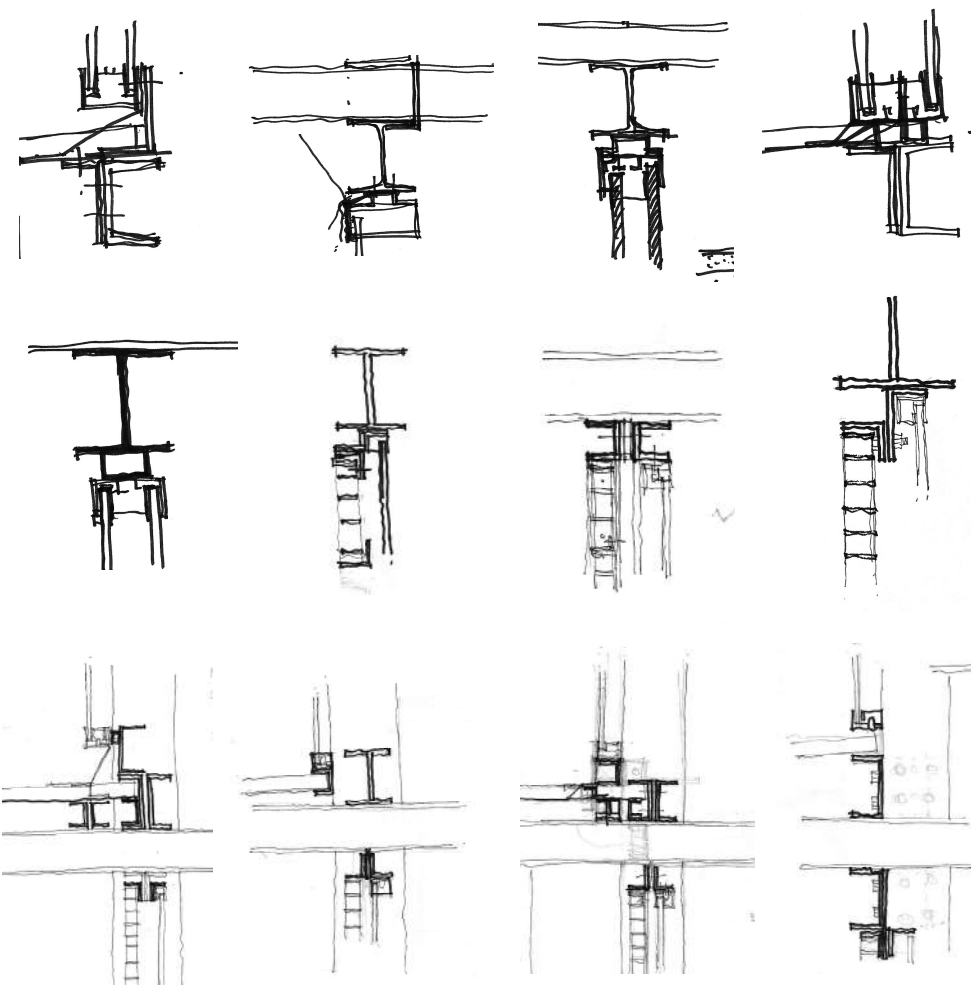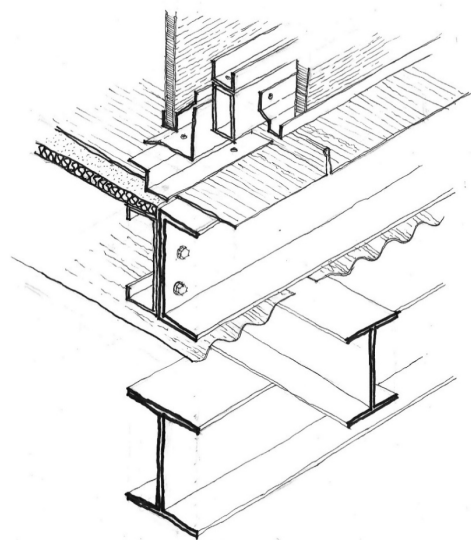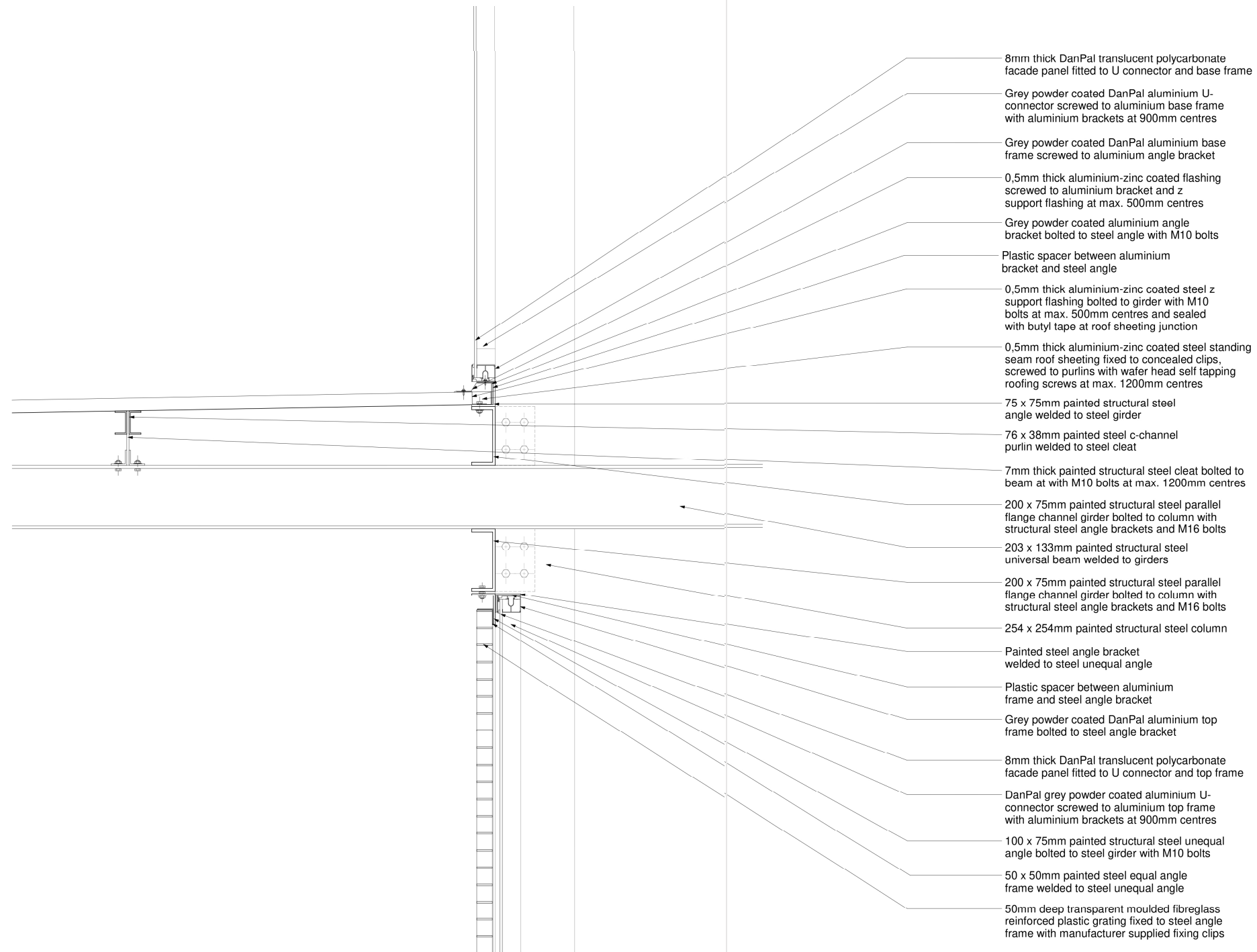<div style="text-align:center">Detail 3 | Veil</div>

The steel frame structure (Figure 89-91) which encloses much of the intervention acts as a receptacle for multiple infill and cladding structures, providing opportunities to mediate the enclosed counter-monumental and monumental forms. In order to maximise these opportunities, the main steel structure's constituent parts are articulated as separate elements. At the termination point of the market stalls' roof, columns, girders, and rafters exist in different planes, making the structure's layering legible and physically accessible for attachment. The market stalls are sheltered by standing-seam roof sheeting, which joins with vertical polycarbonate panels to form a skin that wraps over the steel frame. In the market stalls, closure is provided by a double skin, consisting of polycarbonate sheeting and a fibreglass reinforced plastic grating screen. This creates a robust yet visually permeable skin which allows the transmission of light between interior and exterior spaces. Structures which attach to the steel frame are designed to be removed, providing flexibility for future change. This layer serves as the mediator and connector between the other layers, tying the scheme together physically and conceptually.
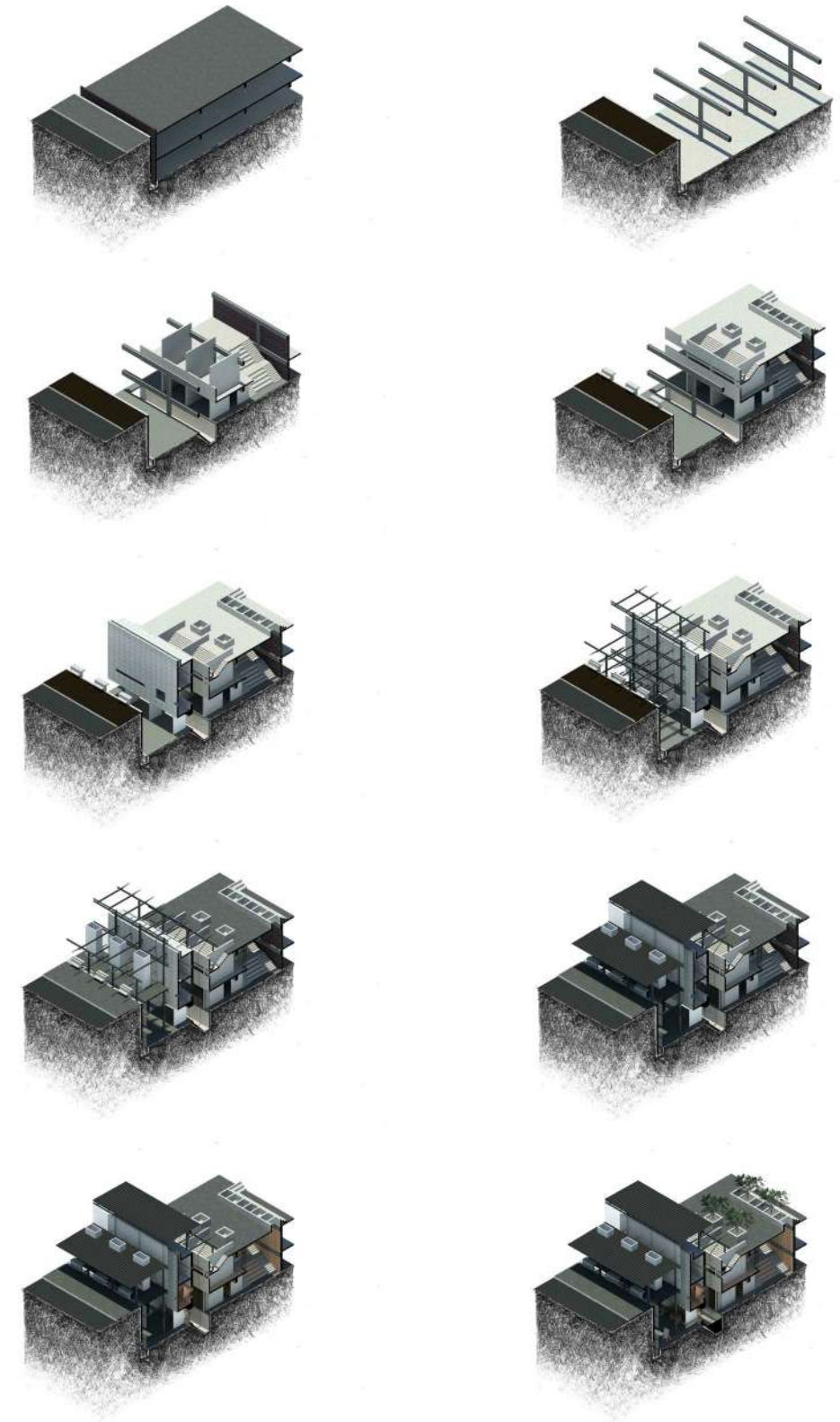
8mm thick DanPal translucent polycarbonate
facade panel fitted to U connector and base frame

Grey powder coated DanPal aluminium U-
connector screwed to aluminium base frame
with aluminium brackets at 900mm centres

Grey powder coated DanPal aluminium base
frame screwed to aluminium angle bracket

0,5mm thick aluminium-zinc coated flashing
screwed to aluminium bracket and z
support flashing at max. 500mm centres

Grey powder coated aluminium angle
bracket bolted to steel angle with M10 bolts

Plastic spacer between aluminium
bracket and steel angle

0,5mm thick aluminium-zinc coated steel z
support flashing bolted to girder with M10
bolts at max. 500mm centres and sealed
with butyl tape at roof sheeting junction

0,5mm thick aluminium-zinc coated steel standing
seam roof sheeting fixed to concealed clips,
screwed to purlins with wafer head self tapping
roofing screws at max. 1200mm centres

75 x 75mm painted structural steel
angle welded to steel girder

76 x 38mm painted steel c-channel
purlin welded to steel cleat

7mm thick painted structural steel cleat bolted to
beam at with M10 bolts at max. 1200mm centres

200 x 75mm painted structural steel parallel
flange channel girder bolted to column with
structural steel angle brackets and M16 bolts

203 x 133mm painted structural steel
universal beam welded to girders

200 x 75mm painted structural steel parallel
flange channel girder bolted to column with
structural steel angle brackets and M16 bolts

254 x 254mm painted structural steel column

Painted steel angle bracket
welded to steel unequal angle

Plastic spacer between aluminium
frame and steel angle bracket

Grey powder coated DanPal aluminium top
frame bolted to steel angle bracket

8mm thick DanPal translucent polycarbonate
facade panel fitted to U connector and top frame

DanPal grey powder coated aluminium U-
connector screwed to aluminium top frame
with aluminium brackets at 900mm centres

100 x 75mm painted structural steel unequal
angle bolted to steel girder with M10 bolts

50 x 50mm painted steel equal angle
frame welded to steel unequal angle

50mm deep transparent moulded fibreglass
reinforced plastic grating fixed to steel angle
frame with manufacturer supplied fixing clips

Detail Section 3

Not to scale

91. Detail 3 section (Author 2021)

Section A-A Strip Model

Not to scale

92. Strip model and construction sequence (Author 2021)

Water

Water has historically played an important role in Lilian Ngoyi Square. The construction of the Strijdom Monument included a large fountain, which has been recreated as part of the Square's current articulation. Furthermore, the square collects stormwater, which is currently stored in the second basement but not used. In addition to its potential for reuse, water plays an important spatial, haptic, and systemic role in the new intervention. Pools in the memorial garden areas help define intimate rest spaces in the city and provide a visual mediation and reinterpretation of monumental form, through reflection. These pools flow from the surface of the square into a furrow which reflects light into subterranean spaces, serves as a reference to historical water furrows in the area, and cools air as part of the building's passive ventilation strategy. The water furrow collects groundwater, which penetrates through the existing retaining wall and drainage layer, as well as stormwater runoff from the surface of the square and surrounding roofs. This water is then pumped up to the memorial pools, and flows back down, to avoid possible issues with stagnant water. When excess water enters the system, it flows through a weir into a sand filter, where it receives basic treatment, before it is pumped to the existing 300m³ storage tanks in the basement (Figure 93 and 94). From here, it can be pumped to the building and surrounding context. Water collection and demand calculations (Figure 95-97) were conducted, revealing that enough water is collected to flush all toilets within the building and irrigate all surrounding planting (provided water is stored from summer to supplement the dry winter months) while retaining a significant surplus. These calculations do not account for groundwater infiltration, which will further increase the supply. This will allow excess water to be used in the building and surrounding urban fabric for additional irrigation, cleaning of floor surfaces, and washing of cars or taxis. The collection and distribution of water to the surrounding context serves as another layer of infrastructural provision to the city, further emphasising Lilian Ngoyi Square's role within the greater urban landscape.
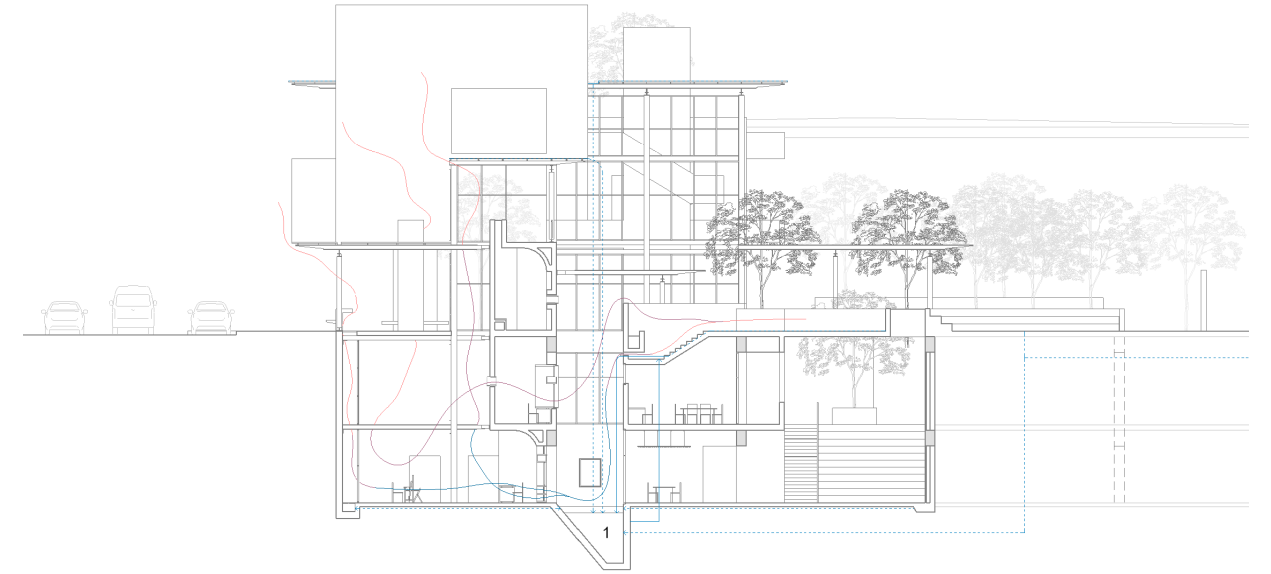
Passive Ventilation Schematic Section
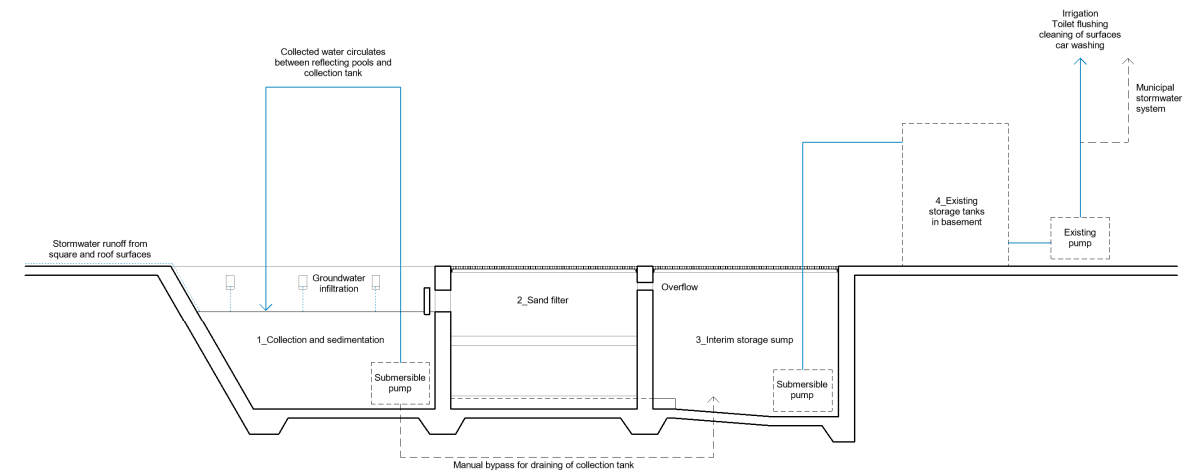
Not to scale

Water System Schematic section

Not to scale

93. Water system schematic sections (Author 2021)
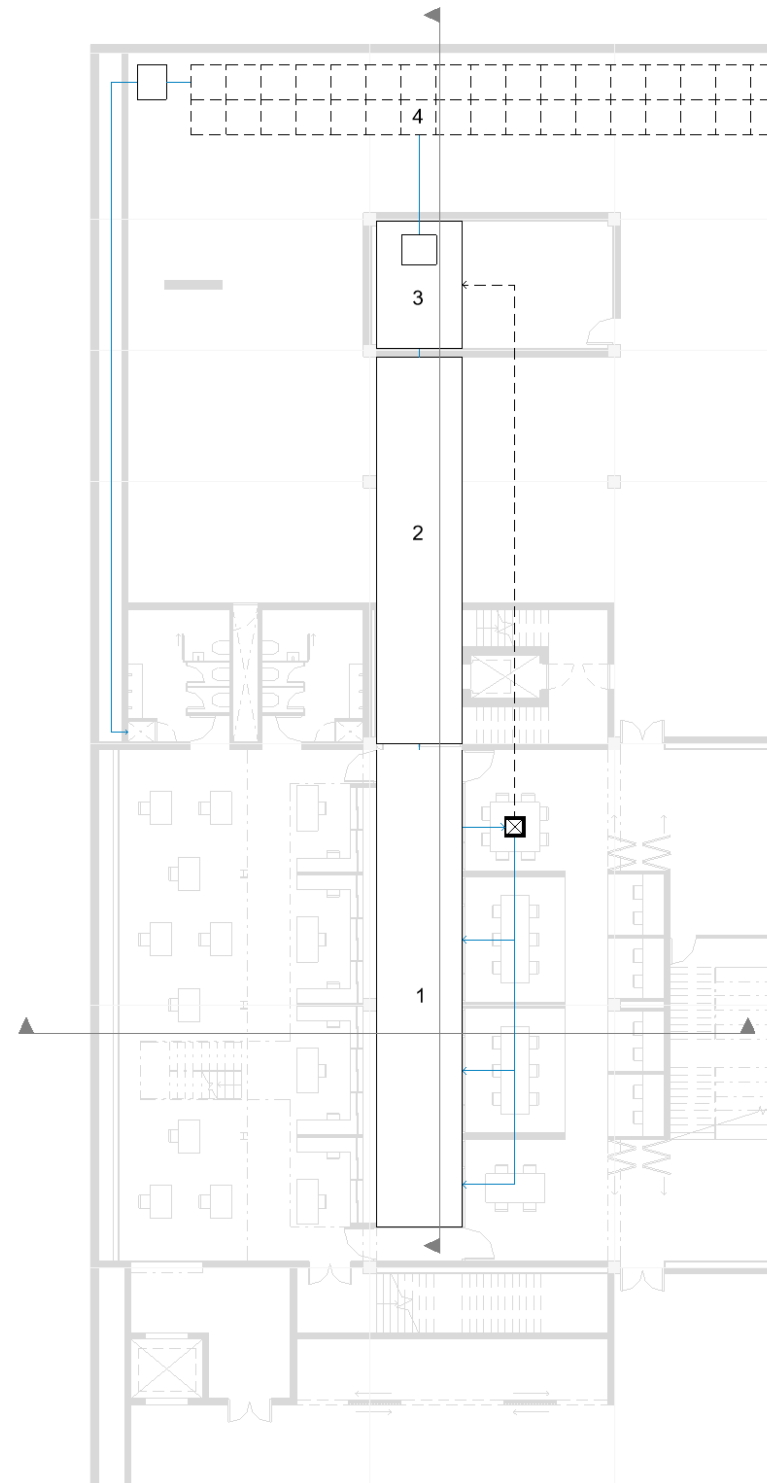
Water System Layout

Not to scale

94. Water system layout (Author 2021)

Effective rainwater collection area

Surface	Area (m2)	Runoff coefficient	Effective collection area (m2)
Metal roofing	630	0,8	504
Paving	1915	0,7	1340,5
Concrete	560	0,8	448
Planting	170	0,1	17
Total effective collection area (m2)			2309,5

Annual rainwater runoff collection

Month	Average rainfall (m)	Effective collection area (m²)	Total collection (m³)
January	0,1	2309,5	230,95
February	0,12	2309,5	277,14
March	0,07	2309,5	161,665
April	0,04	2309,5	92,38
May	0,01	2309,5	23,095
June	0,004	2309,5	9,238
July	0,001	2309,5	2,3095
August	0,003	2309,5	6,9285
September	0,009	2309,5	20,7855
October	0,06	2309,5	138,57
November	0,098	2309,5	226,331
December	0,11	2309,5	254,045
Total annual runoff collection (m³)			1443,44

95. Water collection calculations (Author 2021)

Irrigation demand calculations

Irrigation requirements	Medium - 20mm/week
Irrigation system efficiency	Sprinklers, night - 75% efficiency (requires addition of 1/3 demand to compensate)
Planted area	200m2
Plant density factor	Normal - 1
Microclimate factor	Normal exposure - 1
Irrigation schedule	50% in rainy months, 100% in dry months

Month	Irrigation requirements ($m/m^2/day$)	Days	Irrigation schedule	Planted area (m^2)	Efficiency factor	Monthly demand (m^3)
January	0,003	31,00	50%	200,00	1,33	12,37
February	0,003	28,00	50%	200,00	1,33	11,17
March	0,003	31,00	50%	200,00	1,33	12,37
April	0,003	30,00	100%	200,00	1,33	23,94
May	0,003	31,00	100%	200,00	1,33	24,74
June	0,003	30,00	100%	200,00	1,33	23,94
July	0,003	31,00	100%	200,00	1,33	24,74
August	0,003	31,00	100%	200,00	1,33	24,74
September	0,003	30,00	100%	200,00	1,33	23,94
October	0,003	31,00	50%	200,00	1,33	12,37
November	0,003	30,00	50%	200,00	1,33	11,97
December	0,003	31,00	50%	200,00	1,33	12,37
Total annual irrigation demand (m^3)						218,65

Sanitation demand calculations

Occupancy	Occupants	Active days per week
Seminar, meeting, and event spaces	70	7
Workshops	50	7
Office	10	5

Sanitary fixture	Flow rate
WC	4 litres per flush
Urinal	1,7 litres per flush

Sanitary fixture	Annual water demand (m^3)
WC	216
Urinal	70

96. Water demand calculations (Author 2021, adapted from Green Star assessment)

Total demand calculations

Month	Toilet flushing demand (m^3)	Urinal flushing demand (m^3)	Irrigation demand (m^3)	Total monthly demand (m^3)
January	18	5,8	12,37	36,17
February	18	5,8	11,17	34,97
March	18	5,8	12,37	36,17
April	18	5,8	23,94	47,74
May	18	5,8	24,74	48,54
June	18	5,8	23,94	47,74
July	18	5,8	24,74	48,54
August	18	5,8	24,74	48,54
September	18	5,8	23,94	47,74
October	18	5,8	12,37	36,17
November	18	5,8	11,97	35,77
December	18	5,8	12,37	36,17

Supply and demand calculations

Month	Supply (m^3)	Demand (m^3)	Balance (m^3)	Cumulative balance (m^3)
January	230,95	36,17	194,78	194,78
February	277,14	34,97	242,17	436,95
March	161,67	36,17	125,5	562,45
April	92,38	47,74	44,64	607,09
May	23,01	48,54	-25,53	581,56
June	9,24	47,74	-38,5	543,06
July	2,31	48,54	-46,23	496,83
August	6,93	48,54	-41,61	455,22
September	20,79	47,74	-26,95	428,27
October	138,57	36,17	102,4	530,67
November	226,33	35,77	190,56	721,23
December	254,05	36,17	217,88	939,11

97. Water supply and demand calculations (Author 2021)

Light

The subterranean nature of much of the intervention, and the lighting requirements of production spaces, such as workshops, provide a challenge in ensuring enough natural light illuminates spaces. This challenge, however, also provides an opportunity to explore the monumental and celebratory potential of light within the project's conceptual framework. The main space used for the daylighting case study is the textile workshop, as it is situated at the intervention's lowest level, and requires a range of different lighting conditions to suit the specific activities which take place within. To this end, several daylighting strategies are utilised to provide appropriate natural lighting for different conditions. The loom workshop space receives mainly diffuse light from deep lightwells above, while the sewing stations receive more direct light from the adjacent atrium / void space to facilitate detailed work. The sewing stations will include supplementary artificial lighting and screening systems to provide inhabitants a greater degree of control over the lighting conditions in their stations. The loom workspace will receive general artificial lighting when necessary, as the larger scale tasks undertaken here require less precision. In order to test the daylighting strategies quantitatively, a Sefaira analysis (Figure 98) was conducted using a model of the workshop space. Several iterations were analysed, testing the percentage of occupied hours at 300 lux (for general lighting in the main workshop space) and 500 lux (for more focused lighting in the sewing stations). Furthermore, the general lighting quality was assessed to determine overlit, well lit, and underlit spaces. The iterative process resulted in large improvements to the daylighting quality in the workshop. Most of the space is well lit and the 300 lux and 500 lux targets are met in the respective spaces for the majority of occupied daylight hours.

Iterations

Base case

Clerestory

Pavement light

Light wells (final iteration)
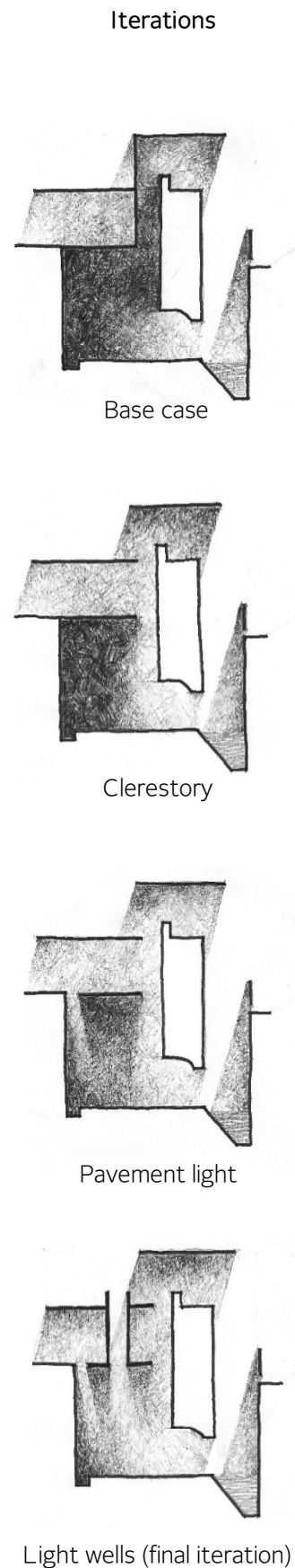
Percentage of occupied hours receiving min. 300 lux

0% 25% 50% 75% 100%

Percentage of occupied hours receiving min. 500 lux

0% 25% 50% 75% 100%

Over lit well lit under lit
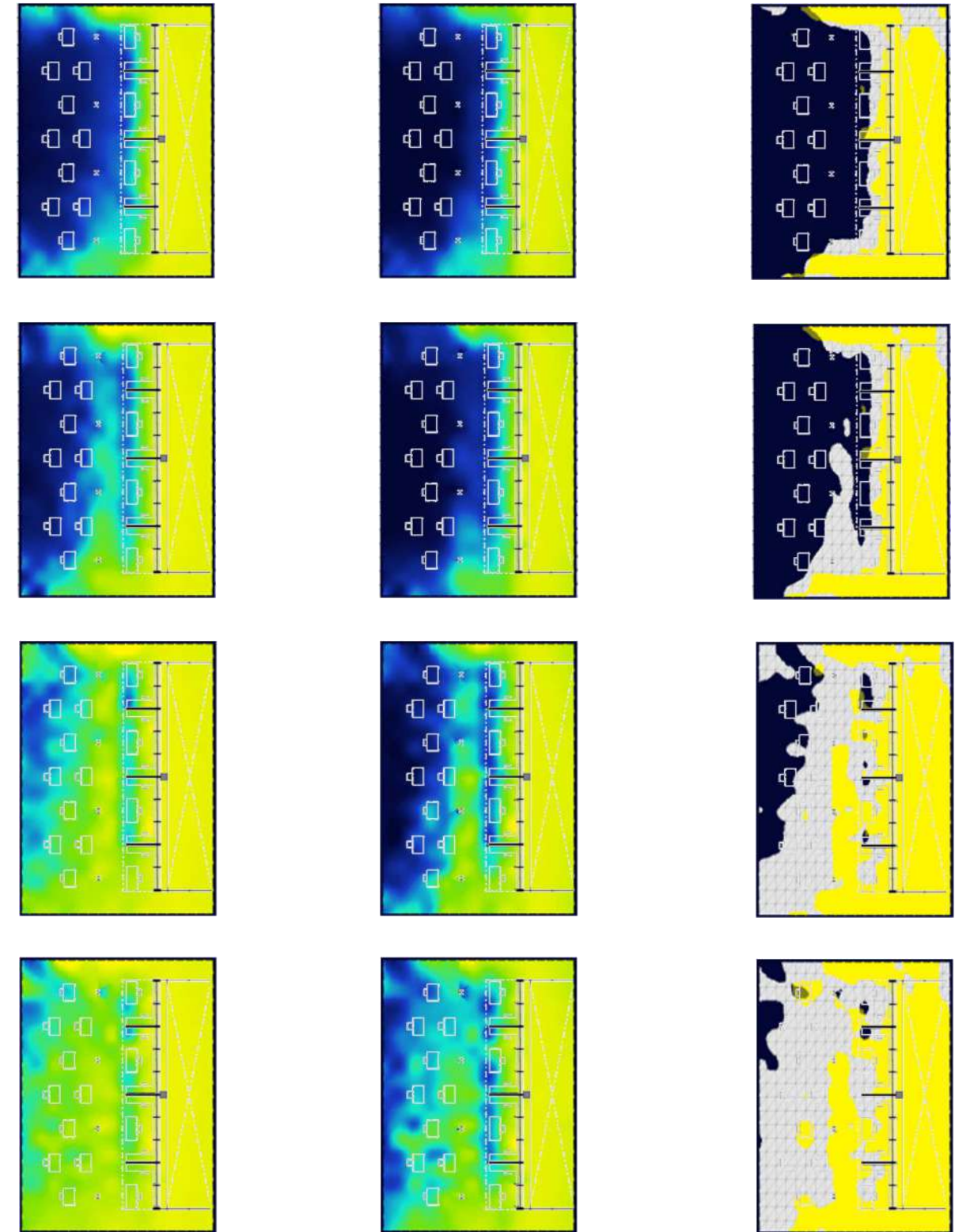
98. Daylighting analysis (Author 2021, adapted from Sefaira)

Sustainability

According to a preliminary Green Star assessment (Figure 99), the intervention achieves a score of 5 stars out of 6. This is due in large part to the daylighting and water collection measures proposed, as well as the reuse of the site's existing basement structure. The rating could be improved through a larger emphasis on the regeneration of natural ecology, or the treatment of building emissions such as sewage, but these are not realistically achievable on the site due to its relatively small size and the existing structures it houses. Nevertheless, the intervention contributes meaningfully to the city in other capacities.

99. Green Star rating (Author 2021, adapted from Green Star assessment)
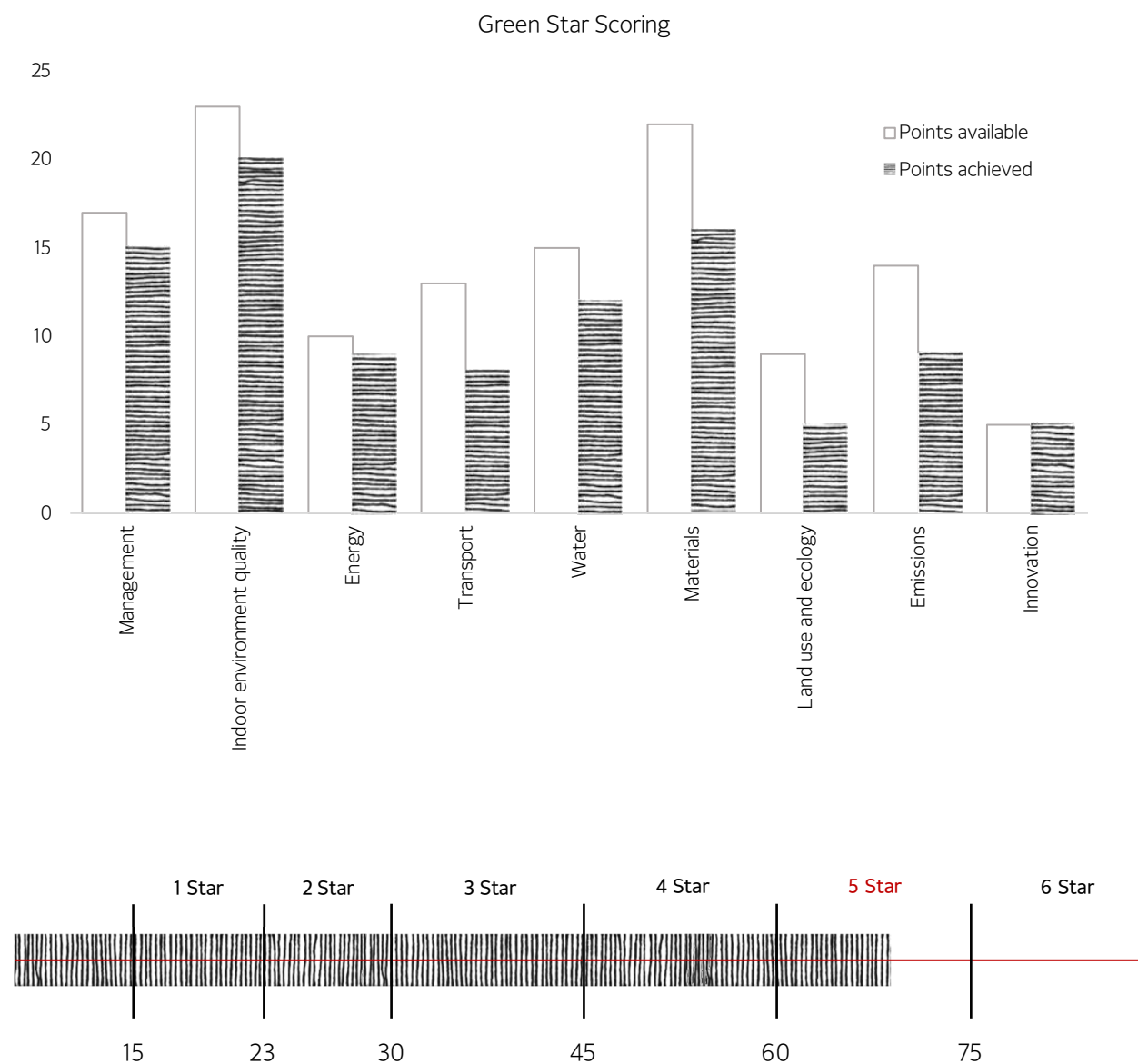
Conclusion

Lilian Ngoyi Square's current isolation from urban space, history, and everyday urban inhabitants necessitates a reconsideration of monumental architecture in the City of Tshwane to express an inclusive identity. The recognition of the site's complex history and meaning, alongside the accommodation of urban temporality and heterogeneity, are the first steps in reconnecting this space with a multiplicity of memory and meaning. This has been attempted through the application of counter-monumental principles and subversion of traditional monumental form through a layered approach to spatial and technological articulation. Ultimately, however, the success of the scheme is dependent on its ability to accommodate and express memory, identity, and user agency. It is only through the inhabitation, interpretation, and reshaping of the architecture, by the everyday urban inhabitant, that the reconciliation of the monumental and the everyday may occur.

4 | Critical reflection

Initiation

The City of Tshwane (CoT) has undergone drastic changes since the advent of democracy, as previously excluded groups seek access to the opportunities provided by the city. This is evident through the prominence of new forms of occupation in the city, including informal inhabitation, which reshape the established urban fabric and create a transient, unknowable condition – the "real African city" (Pieterse 2011:6-7). Initialised as a general investigation of informal urban action, the dissertation was eventually focused through the lens of monumentality. The importance of monumental architecture in representing the identity of the city, urban space, and urban inhabitants - and the failure of examples in the CoT to meaningfully engage with any of these issues (Figure 100) - provided a lens through which to focus the investigation.
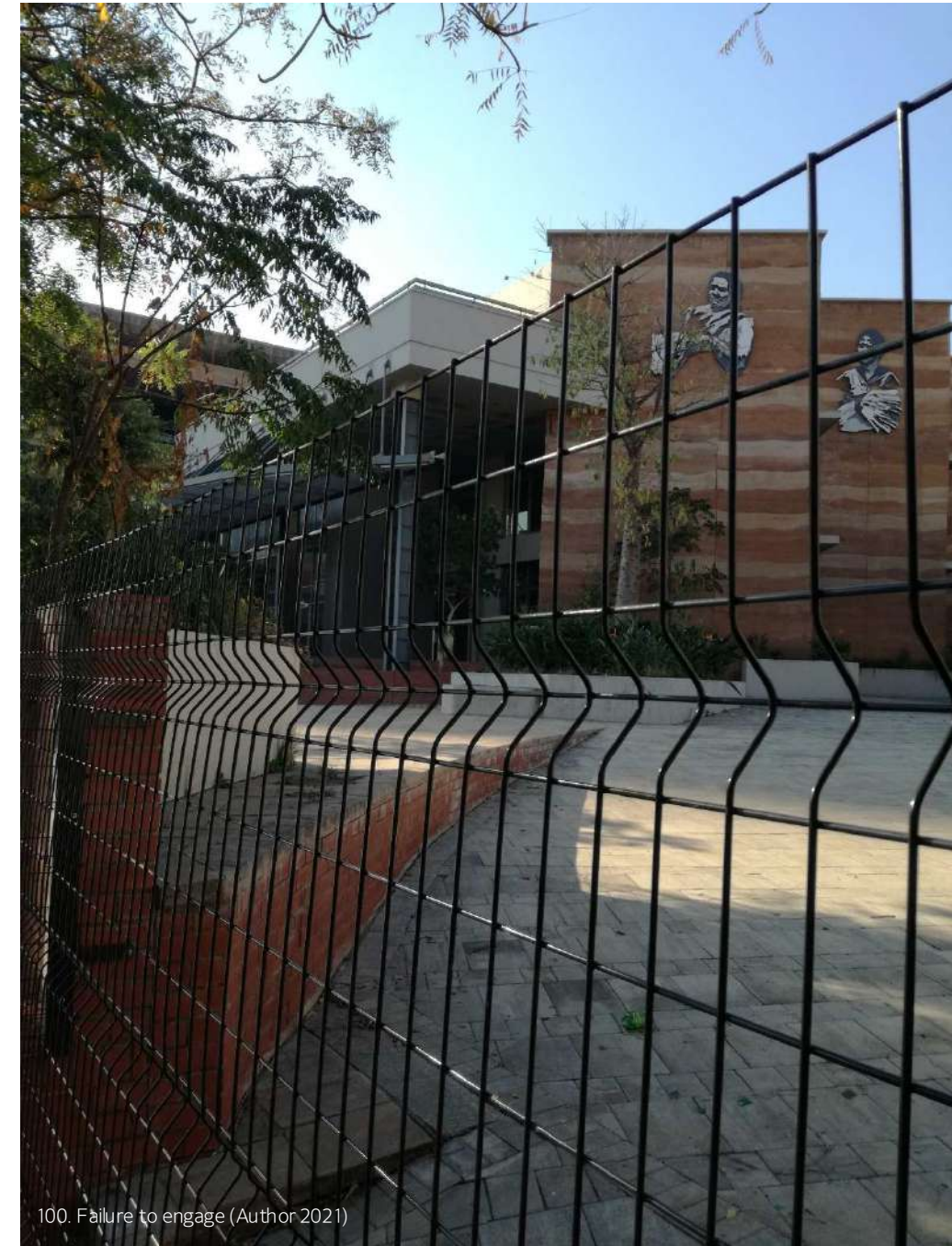
100. Failure to engage (Author 2021)

Investigation

The Women's Living Heritage Monument at Lilian Ngoyi Square is a prominent example of the isolation between the monumental and the everyday, excluding urban inhabitants from the space and disregarding the site's complex, contested history. In addition, The Women's Living Heritage Monument imposes a singular, static identity on the site, which nullifies its meaning and significance in the development of the CoT and South Africa. This separation between architectural representation and the "real" city's inhabitants, needs, identities, and memories highlights the importance of appropriate architectural responses to enhance and celebrate South Africa's spatial and social development towards urban inclusivity. In response, analysis and interpretation of architectural and urban theory suggested that the reconciliation of the monumental and everyday relies on the accommodation of complexity, uncertainty, and transience in the use of monumental space and interpretation of its meaning. This necessitates an architectural response which integrates memory and history alongside current and future urban needs. Monumental architecture in the CoT should, therefore, deal with both poetic expression and infrastructural provision.

The design approach relied heavily on iterations of plans and sections (Figure 101) to generate responses. However, given the spatial complexity required to address the numerous issues and opportunities of the project, physical and digital models proved invaluable throughout the process. The variety and complexity of informants was difficult to manage and integrate, with the translation of memory and history to architectural form proving particularly challenging. Through trial and error, and the lessons learned from precedent studies of counter-monumental architecture (Bach 2016, Stevens, Franck, and Fazakerly 2012, Young 1992), a syntax with which to represent and integrate history and memory in space was developed. This step was instrumental in uncovering the possibilities for architecture to reify memory, history, and loss, a characteristic which has not been fully realised in the CoT. Additionally, the investigation of responses to flexibility in South African architecture highlighted the rich body of work that has already been completed in this regard. There are numerous approaches to architecture in South Africa which accommodate programmatic complexity and transient inhabitation in innovative ways, further highlighting the missed opportunities in spaces such as Lilian Ngoyi Square.
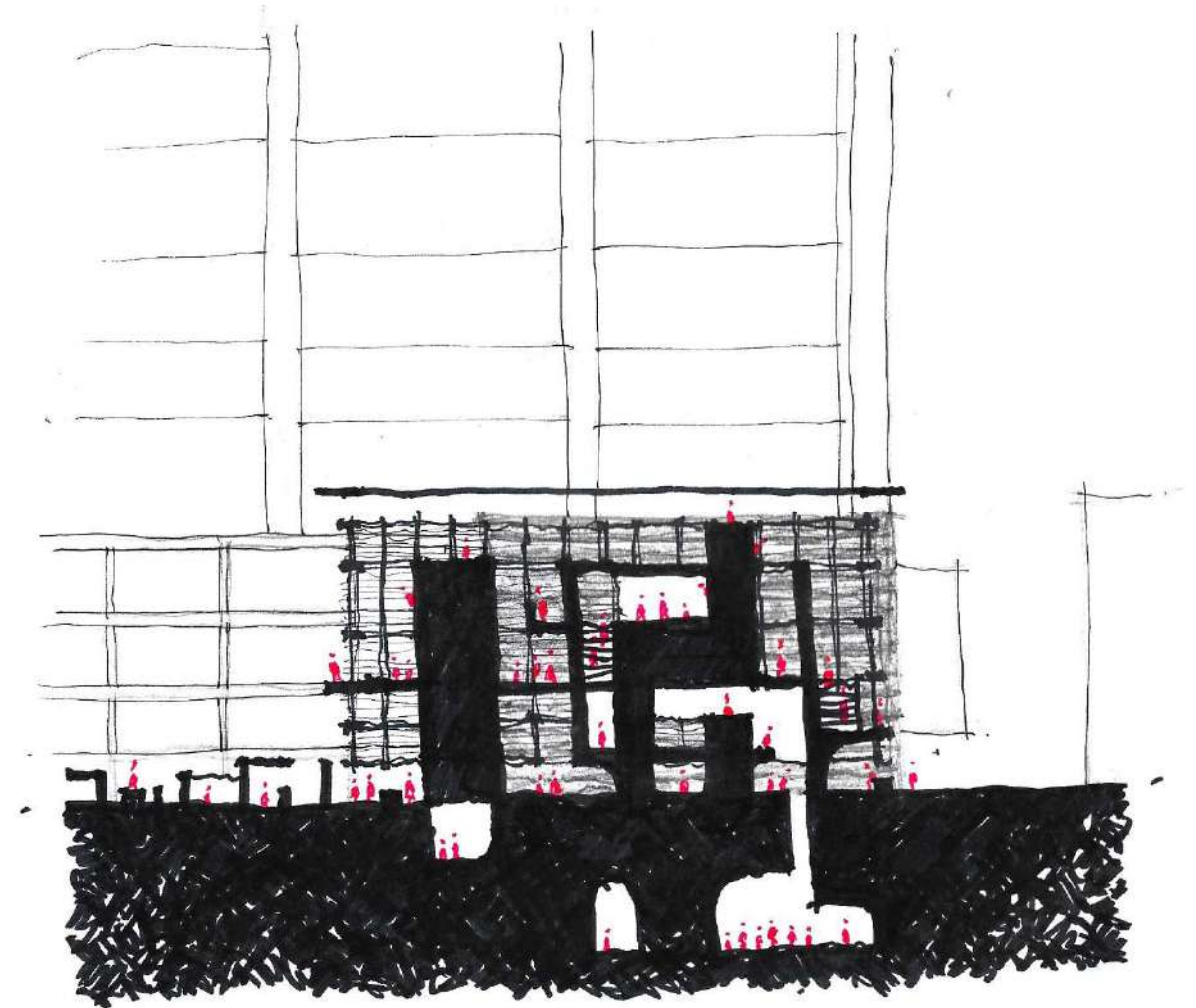
101. Preliminary sectional exploration (Author 2021)

Application

Throughout the dissertation, on-site investigation, desk top analyses, engagement with urban and architectural theory, and precedent studies revealed the inadequacy of traditional monumental responses to address the need for inclusive spaces and representation in the changing CoT. In response, design development focused on reconsidering the articulation of monumental forms to produce robust, responsive urban architecture which allows flexibility in use and interpretation. This reconsideration was based on the subversion of traditional monumental form, through transient inhabitation and appropriation; mediation of monumental form to alter its relationship with surrounding spaces and inhabitants; and the use of counter-monumental forms and gestures to represent history. The development of specifically defined layers of intervention, each dealing with different informants, helped ensure formal and spatial legibility in the translation of concepts and intent to architecture. This layering, in turn, informed the technological articulation of the scheme, emphasising the role of each layer as a constituent of the whole. This layered approach to space and technology allowed the required complexity of the architecture to be developed while remaining legible, controlled, and ordered. The resulting conditions of the scheme cumulatively form a potential response to the shortcomings of traditional monumentality in the urban landscape of the CoT. Ultimately, it is the integration of history, memory, loss, celebration, and everyday urban need (Figure 102), which facilitates the reconciliation of the monumental and the everyday.
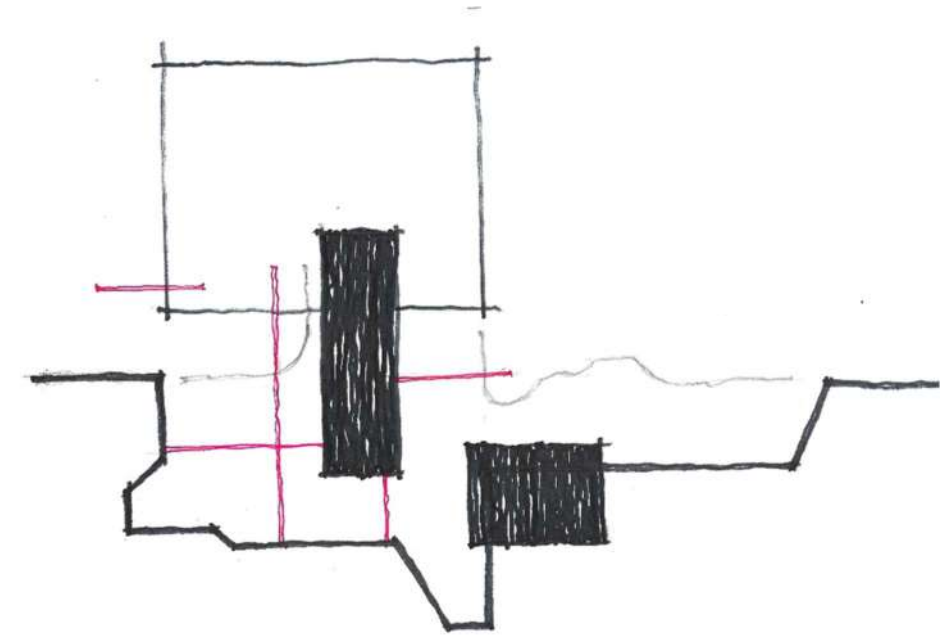
102. Integration (Author 2021)

Reflection and extension

The investigations undertaken this year have highlighted the complexity of South Africa's urban landscape, as well as the potential for architecture to enhance conditions for current and future urban inhabitants. Additionally, they have illuminated the important role of architecture in reifying local memory and identity, while fostering an appreciation of the richness provided by a space's historical and intangible context. I have learned innumerable lessons concerning the generation and refinement of architecture throughout the year, creating a solid foundation for the transition to practice. My established design process has had to be constantly re-evaluated and adapted throughout the year, as its inadequacy in dealing with the complex issues at hand was revealed. Usually focused on the design of isolated architectural objects, my approach to space-making has been tested and, I believe, improved through the exploration of different methodologies. In a sense, the resulting architecture (Figure 103) is a critique of my own approach to design, as much as it is the inadequacy of monumental edifices in the CoT.

Moving forward, it is important that the past and its significance to individuals and groups is acknowledged, while looking to the future, in order to realise the promise of inclusive spaces in our cities. Furthermore, the role of urban architecture to serve inhabitants and enhance the potential of urban space must be emphasised whenever possible, to provide innovative responses to the exclusionary nature of many historical and contemporary interventions. The generation of an inclusive urban identity, and inclusive city, is only possible through the challenging and reconsideration of established typologies and norms, to ensure appropriate responses to current and future needs.
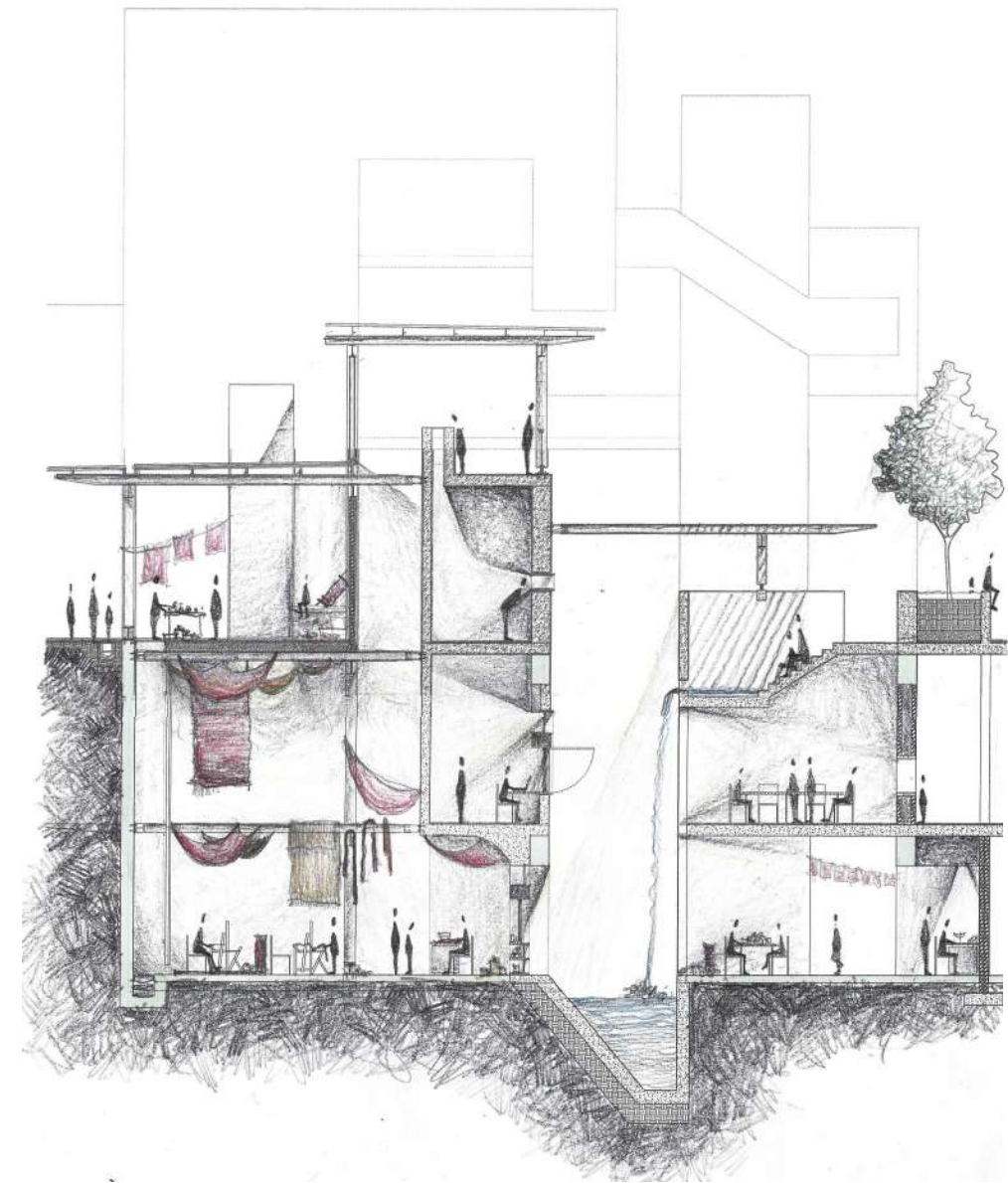
103. The reconciliation of the monumental and the everyday (Author 2021)

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List of figures

Ethical approval

Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en Inligtingtegnologie / Lefapha la Boetšenere, Tikologo ya Kago le Theknolotši ya Tshedimošo

9 June 2021

Reference number: EBIT/79/2021

Ms A van Aswegen
Department: Architecture
University of Pretoria
Pretoria
0083

Dear Ms A van Aswegen

FACULTY COMMITTEE FOR RESEARCH ETHICS AND INTEGRITY

Your recent application to the EBIT Research Ethics Committee refers.

Conditional approval is granted.

This means that the research project entitled "Masters Professional Mini-Dissertation in Architecture, Landscape Architecture and Interior Architecture (Group / Blanket)" is approved under the strict conditions indicated below. If these conditions are not met, approval is withdrawn automatically.

Conditions for approval
This application is approved based on the summaries provided.
Applications from each student (including application forms and all necessary supporting documents such as questionnaire/interview questions, permission letters, informed consent form, etc) will need to be checked internally by the course coordinator/ supervisor. A checklist will need to be signed off after the checking.
All of the above will need to be archived in the department and at the end of the course a flash disc / CD clearly marked with the course code and the protocol number of this application will be required to be provided to EBIT REC administrator.
No data to be collected without first obtaining permission letters. The permission letter from the organisation(s) must be signed by an authorized person and the name of the organisation(s) cannot be disclosed without consent. Where students want to collect demographic the necessary motivation is in place.

This approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Code of Ethics for Scholarly Activities of the University of Pretoria, or the Policy and Procedures for Responsible Research of the University of Pretoria. These documents are available on the website of the EBIT Ethics Committee.

If action is taken beyond the approved application, approval is withdrawn automatically.

According to the regulations, any relevant problem arising from the study or research methodology as well as any amendments or changes, must be brought to the attention of the EBIT Research Ethics Office.

The Committee must be notified on completion of the project.

The Committee wishes you every success with the research project.

Prof K.-Y. Chan
Chair: Faculty Committee for Research Ethics and Integrity
FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY