



UNIVERSITEIT VAN PRETORIA
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YUNIBESITHI YA PRETORIA

urban activator

a contextually generated mixed-use building



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Submitted by Lara Ruth Wilson
Mentor and Study Leader: Nico Botes

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Preface

Set in the historic centre of the Pretoria CBD, this study draws extensively on its context to formulate an appropriate response to bringing about urban regeneration in this section of the city.

The study was initiated with the selection of a small site set in the perceived northern portion of the inner city. By challenging both the alleged threshold between the 'north' and the 'inner city' and the city council's proposals for the surrounding sites, the proposed building attempts to create meaningful space while enriching the visitor's experience of his immediate surroundings.



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Introduction

The city of Pretoria is the historic capital of the Zuid-Afrikaansche Republiek (ZAR) and today shares the title with the city of Cape Town. Over the last decade, Pretoria has experienced an economic shift that has led to a lack of interest in portions of the inner city. This disinterest is most notable in the northern portion of the inner city, which is no longer perceived as integral to the CBD. In spite of its wealth in history and its dramatic setting, Pretoria does not feature strongly in the itinerary of either local or international tourists. While government departments attempt to boost investment interest, the area calls for a catalytic intervention to prevent further decay and bring about the required change.



Project Background

Due to the changing dynamics of the inner city, it is no longer the preferred residential location for the more affluent. The city has seen a consistent decentralisation, with low-density residential and commercial growth shifting towards the eastern regions. The changing location of employment opportunities has caused a lack of investment interest in the city. Factors such as crime, the decay of the urban environment and the absence of adequate social facilities have contributed to the momentum of the economic shift. Roberts refers to this trend as “*in-situ*”¹ decay. The city lacks a variety of activities that contribute to it functioning as a vibrant 24 hour city.

Selected Site

The selected site is located on the south-eastern corner of the intersection of Paul Kruger Street and Struben Street, and falls within the boundaries of the perceived inner city. The intersection with Struben Street acts as the threshold and forms an unplanned gateway into the city when entering from the north. The surrounding context is rich in historical value and architectural heritage, and it is this context that generates the design approach for the proposed building.

Delimitations

A large portion of this dissertation deals with the history and significance of the Old Synagogue, located adjacent to the selected site. It is important to note, that this project does not address the synagogue itself, but focuses on an approach that allows for the successful integration of the neglected building into the current and future context. The project goes as far as to propose a function for the synagogue in relation to the proposed spaces that surround it. It does not address any restorative measures that may be required. The proposed building is directed towards the Old Synagogue in an attempt to celebrate its history and value, rather than competing with it in the urban context.

Assumptions

Due to the theoretical nature of this dissertation and its obvious limitations, it is impossible for this proposal to address the issue of urban regeneration in its entirety. According to Roberts, regeneration goes “beyond the aims, aspirations and achievements of urban renewal”.² Only by addressing broader economic and social issues is the sustainability

of the intervention ensured. By nature, the process of urban regeneration is truly a process that must be seen as a long-term cycle of activity which inevitably requires flexibility due to the numerous parties involved.³ This dissertation focuses on the issue of renewal, but suggests a broader, more encompassing approach. Therefore, it is only the physical and environmental regeneration – often referred to as urban renewal – that is dealt with in this dissertation.

The study examines and responds to the current challenges and the present context, but is in line with the study group’s envisioned proposal⁴ for the northern portion of the Paul Kruger Street spine. The objective is to establish an optimum solution for the site, rather than being driven by the realities of economic and political trends.

1. Roberts (2005:27)

2. Roberts (2005:18)

3. Roberts (2005:6)

4. Students working along the northern section of the Paul Kruger Street spine jointly established a visionary framework

Proposed Group Framework

The objective of establishing an urban framework⁵ is to formulate a vision for the northern section of the Paul Kruger Street spine which can act as a guideline for decision-making. The proposal addresses the following:

- A network of public space that maintains the finer urban character of the northern portion of the city
- The network of public spaces mirrors the southern portion of the spine, namely Pretorius Square
- The activities contribute to the life on street, thereby playing a role in the surveillance and safety thereof (dependant on activities and participants/occupants)
- The introduction of a residential component west of Paul Kruger Street, in line with the city council's current proposal⁶
- The encouragement of local small businesses and the promotion of South African products
- The discouragement of private vehicular transport in the inner city, in line with the long-term vision of the partial 'pedestrianisation' of Paul Kruger Street and the future operation of a tram line along this route

5. refer to figure 4.01

6. refer to the Tshwane Inner City Development and Regeneration Strategy (2005:17)

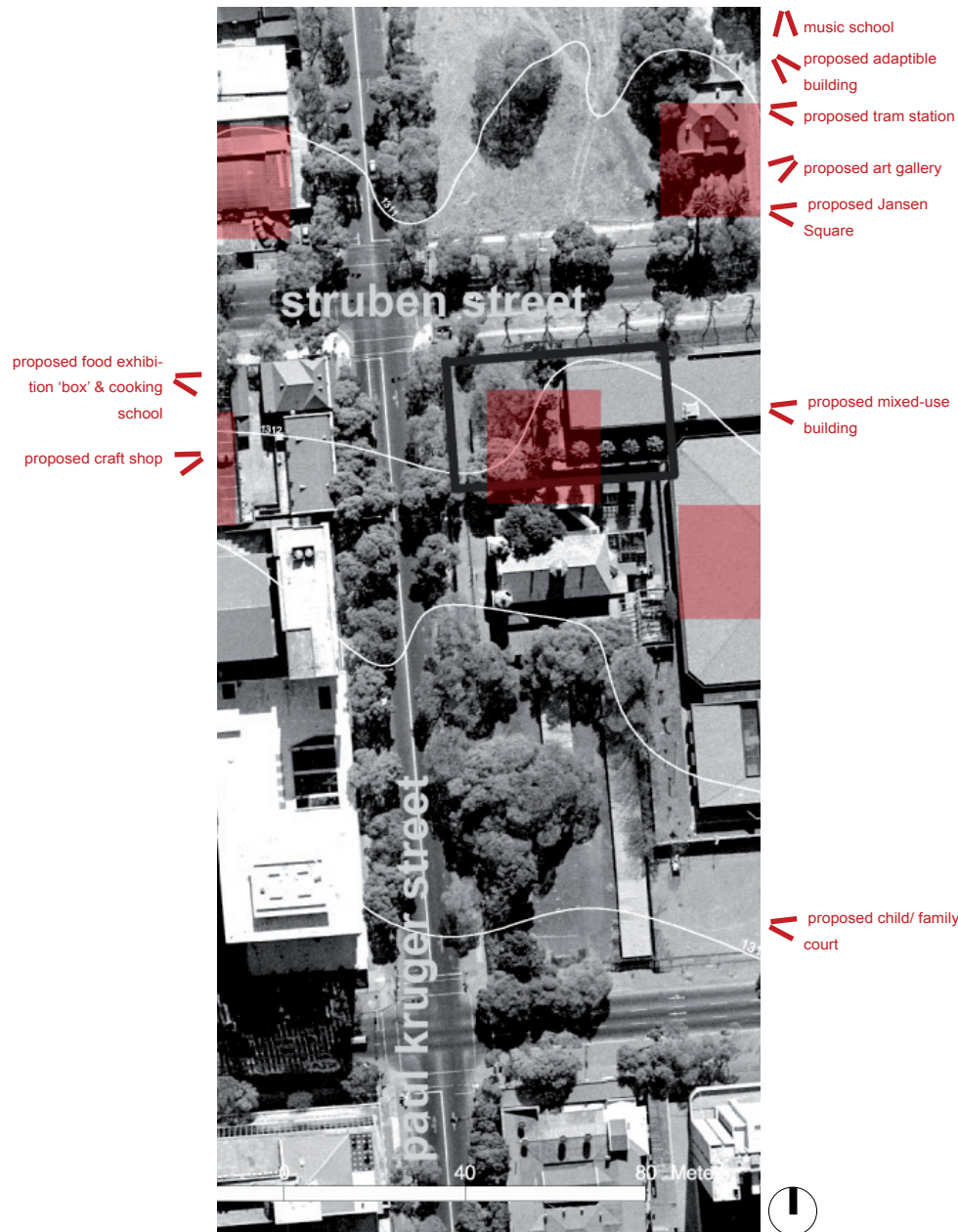


Figure 4.01: Map of proposed group framework and proposed projects



Approach

The City of Tshwane council maintains, “The Inner City Development and Regeneration Strategy is based on a ‘catalytic intervention-approach’ whereby specific strategic interventions are proposed to address the challenges in order to achieve the critical success factors”.⁷ The mixed-use programme for the proposed building begins to activate the space over an extended period of time, while providing some of the basic amenities currently lacking in the urban environment, allowing it to function as the anticipated catalyst. As Gehl points out, “the integration of various activities and functions in and around public spaces allows the people involved to function together and stimulate and inspire one another”.⁸ In addition, the dynamics of various activities begin to address the issues of safety and security, and help to awaken the general public’s interest in their capital city.

Client /User

Due to its location and the city council’s current drive to encourage government departments to relocate to the area, the office space is required to house the Provincial Heritage Resources Agency of Gauteng (PHRAG), which currently operates from a private residence in the east of Pretoria. Other non-government and heritage organisations would be encouraged to occupy the available office space.

On an urban level, the increased density introduced to the site contributes to the goal of limiting urban sprawl by maximising land-use values as set out in the City of Tshwane Spatial Development Strategy: 2010 and Beyond.⁹

Proposed Building Programme

Primarily, the building addresses the lack of temporary accommodation in the inner city, by targeting tourists, interns and researchers that may want a budget accommodation option while experiencing the city of Pretoria. The mixed-use building accommodates retail facilities which target businesses and office space for small businesses, in addition to a small percentage of luxury accommodation, which is virtually non-existent in the area, to ensure a degree of continuity.

Due to the nature of such a catalytic intervention, the building itself allows for a degree of adaptability in order to accommodate unforeseen spatial requirements alongside changing city dynamics. It also ensures a smoother transition for residential developments that have been identified for the area west of Paul Kruger Street.

7. Tshwane Inner City Development and Regeneration Strategy (2005:9)

8. Gehl (1987:97)

9. City of Tshwane Spatial Development Strategy: 2010 and beyond (2007:13)

The Macro Scale

The earliest records of Pretoria

The earliest written records of Pretoria,¹ date back to the early 1800s and were compiled by various white travellers comprising hunters, traders, scientists and missionaries. Prior to that, Pretoria's history was transmitted orally in accordance with the tradition and custom of the indigenous black people that inhabited the area. According to legend, the Bakwena, a western Sotho people, were the first to settle along the banks of the Apies River .

The founding of Pretoria

The Great Trek began in 1835 with the Transvaal² Boer's departure from the Cape Colony. Their first settlements in the Transvaal include Klerksdorp in 1838 and Potchefstroom in the same year, followed by Lydenburg in 1849. It was only in 1855 that Mathinus Wessel Pretorius³ founded Pretoria. He later became the first president of the Zuid-Afrikaan-sche Republiek , which was founded with the construction of a church on

1. Andrews & Ploeger
(1989:2)

2. Today, a geographical area stretching from the Limpopo in the north to the Vaal in the south, with its east and western boundaries defined by Mozambique and the Kalahari Desert respectively (Fisher, Le Roux & Maré 1998: xvii)

3. Mathinus Wessel Pretorius
(1819-1901)

what is still known as Church Square. In 1860, Pretoria became the seat of government of the ZAR.⁴

Church Square

The original church, completed in late 1856, was built by William Skinner and the brothers Louis and Lionel Devereux. Its walls were built of mud with “crow stepped gables” and the roof was thatched, like the other buildings surrounding the square. It seated 700 people. However, it burned down in 1882 and was replaced with a Victorian gothic structure. Yet, within 20 years, the tower became unstable and the whole church was pulled down to make way for the increasing traffic at the major intersection at the site.⁵

The heart of the city

The founding of Church Square was primarily to accommodate the farmers, who on a quarterly basis congregated at Church Square for several days for *nachtmaal*.⁶ The space, therefore, was large enough to accommodate farmers and their families, ox wagons and any other accompanying animals. The square became the heart of the settlement and thus, the road leading to the square derived its name: Church Street.⁷

Pretoria's naming Tradition

According to Andrews and Ploeger,⁸ Pretoria had a naming tradition which related to prominent figures and the specific uses of space within the city:

“These names were in the past not given, as often today is the case, as the result of a whim or fad, but because it expressed something that belonged to the place or thing.”

Hence, *Marktstraat*,⁹ today known as Paul Kruger Street,¹⁰ derived its name. Paul Kruger Street forms the north-south axis of the city grid and Church Street, which intercepts Paul Kruger Street at Church Square, forms the east-west axis. (refer to figure 5.01)

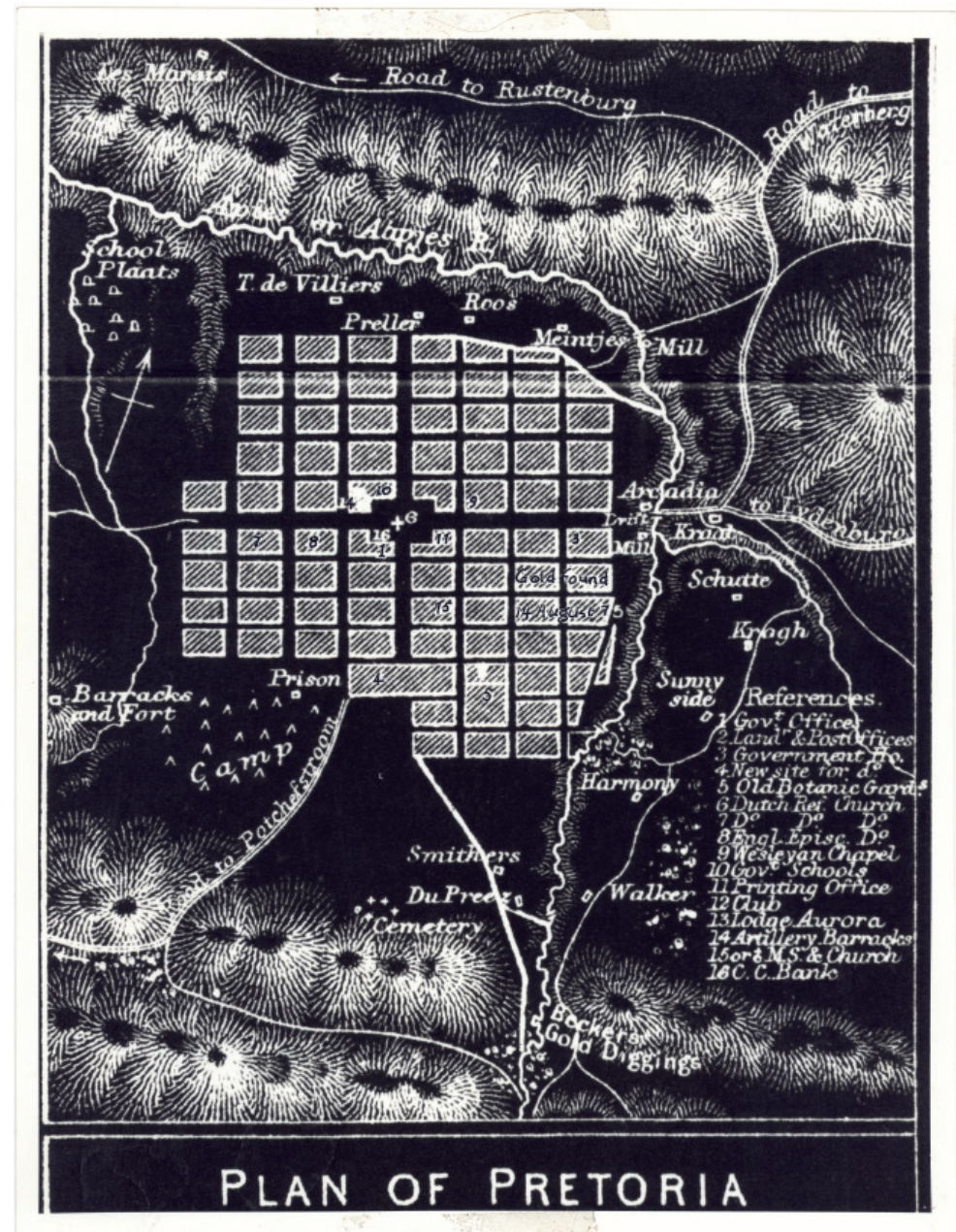


Figure 5.01. Plan of Pretoria dating from approximately 1870s

4. Andrews & Ploeger (1989:5-6)
5. Allen (1971:22)
6. Afrikaans for holy communion
7. Holm in Fisher, Le Roux & Maré (1998:59)
8. Quote by Eugene Nielen Marais (Andrews & Ploeger 1989:1)
9. Market Street
10. According to Andrews & Ploeger, the street name changed during Voortrekker celebrations to commemorate President Stephanus Johannes Paul Kruger (1825-1904)

Holford's Government Boulevard

Eaton, who not only founded the Pretoria Architectural Society (PAS),¹¹ but found himself at the forefront of the organisation, brought about an awareness and concern for the growth and development of the city of Pretoria. His active role and persistence is referred to by Harrop Allin¹² as “Eaton’s crusade for the architectural well-being of the city”. It was on the suggestion of the PAS that the city council invited the British town planner Sir William Holford to visit South Africa and make a proposal for the city in the 1930s.¹³

Holford identified the intersection of Struben Street and Paul Kruger Street, with its impressive views of the Union Buildings and Church Square, and proposed that all government departments should be located along this symbolic east-west axis. The proposed government boulevard terminated at the intersection with a large park. Holford’s proposal was never executed and, until recently, remained on the city council’s agenda for the city. In spite of the changes, several government departments continue to locate themselves on the symbolic east-west axis.¹⁴

It is at the intersection of this historic north-south axis on Struben Street that the selected site is located.

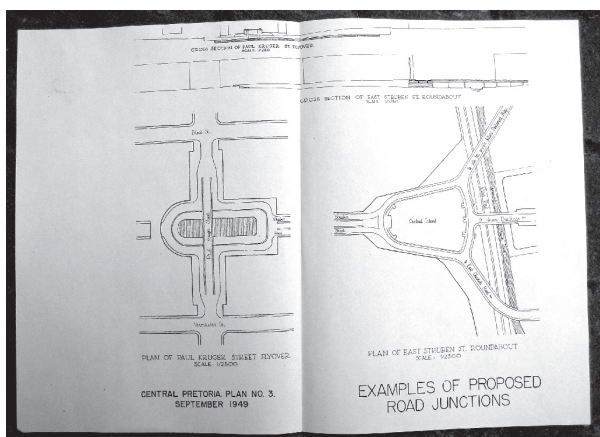


Figure 5.02. Example of proposed road junctions

The Transformation of Pretoria

Designed to achieve urban unity, Pretoria was laid out on a rigid orthogonal grid in contrast to the surrounding natural environment. Symbolic references to its surrounding natural environment suggest the Afrikaner’s interpretation of the *genius loci*.¹⁵ It was the Dutch engineer and architect Sytze Wopkes Wierda,¹⁶ appointed as the head of the Department Puleike Werken (PWD) in 1887, that set the transformation of the nachmaaldorp into the capital of the republic in motion.¹⁷

Architectural Context

The emergence of the third endemic architectural expression, referred to by Fisher¹⁸ as “The Third Vernacular”, came about in Pretoria in the 1930s and 1940s. The first vernacular, being the Cape Dutch Style, which as the name suggests originated in the Cape, was an adaptation of the colonial style. It was followed by the second vernacular, the adaptation of 19th century English Georgian architecture in the Eastern Cape. Pretoria Regionalism, the third vernacular, is therefore the regional adaptation of the International Style. It was especially influenced by Le Corbusier’s climatic responsiveness of the *brise soleil*, as seen executed in South America.¹⁹ The emerging style responded to its contextual restraints in terms of: climate, available materials, site, defence, economics, religion and in some instances, the cultural expression of a community .

Characteristics of Pretoria Regionalism

The following characteristics define Pretoria Regionalism:²⁰

- “Traditional plan-forms
- Rustic brick, either directly as clinker or whitewashed stock
- Low-pitched iron roofs
- Deep shaded eaves and verandas
- Sun-shy windows
- Sensitivity to landscape and land features
- An architecture responsive to climatic constraints”

11. The PAS was founded in 1945 and is known as the Pretoria Institute for Architecture (Pretoria Institute for Architecture 2007: www.pia.org.za)

12. Harrop Allin (1975:57)

13. Harrop Allin (1975:55)

14. Barbir 2007: personal interview

15. Holm in Fisher *et al* (1998:61)

16. Wierda’s main contribution was the introduction of brick, a Dutch tradition that was introduced due to the availability of clay in Pretoria (Holm in Fisher *et al* 1998:66)

17. Holm in Fisher *et al* (1998:66)

18. Fisher in Fisher *et al* (1998:123)

19. Fisher in Fisher *et al* (1998:136)

20. Fisher in Fisher *et al* (1998:125)

Today, the Pretoria inner city is scattered with predominantly modern buildings. (refer to fig. 5.03 - 5.10)

Materials used

According to Fisher,²¹ Pretorians were generally not as wealthy as their Johannesburg counterparts, resulting in careful material selection. It was by means of Wierda's influence from within the PWD that the use of brick became widespread. The Scottish contractor, John Kirkness²² established the brick-making tradition in Pretoria, which was later used throughout South Africa. Roofing material, originally consisting of thatch, eventually gave way to corrugated iron. It was the inverted box-rib (IBR) sheet, patented by Thomas Warren that "became part of the Regionalists' repertoire of materials". Furthermore, standard steel window frames determined the module of Pretoria buildings at the time.

These characteristics prevailed in the work of local architects such as Gerhard Moerdyk, Gordon Leith, Norman Eaton and Gordon McIntosh.²³

21. Fisher in Fisher *et al* (1998:129-132)

22. Kirkness' bricks were used to build the Grootte Schuur Hospital in Cape Town and the post office in what is known as Harare today (Fisher in Fisher *et al* 1998:129)

23. Gerhard Moerdyk (1890-1958), Gordon Leith (1886-1965), Norman Eaton (1902-1966) & Gordon McIntosh (1904-1983)

24. Fisher in Fisher *et al* (1998:140)

25. Holm in Fisher *et al* (1998:72)

Pretoria's character vs. that of Johannesburg

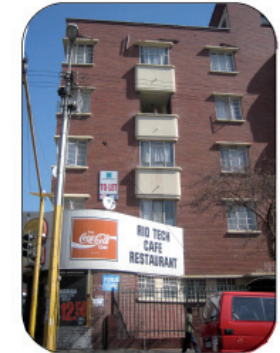
The Afrikaner's strong connection to the earth and landscape through their agricultural heritage and history led to a climatically sensitive and contextual architectural response.²⁴ While Pretoria developed according to its socio-religious values, Johannesburg established as a mining settlement and grew into a city driven by entrepreneurship and modern rationale.²⁵ This mutually supportive difference in character is still evident today, allowing Pretoria to function as the administrative and governmental capital, while Johannesburg remains the commercial capital of Gauteng.



5.03



5.04



5.05

Figure 5.03: Hallmark and Koopkrug Buildings

Figure 5.04 Poynton's Building

Figure 5.05 NHG Building

Figure 5.06: Sammy Marks Centre

Figure 5.07: Wachthuis

Figure 5.08: Nederlands Bank, Pretoria

Figure 5.09: Woltemadegebou

Figure 5.10: Meat Board Building



5.07



5.06



5.08



5.09



5.10

The Meso Scale

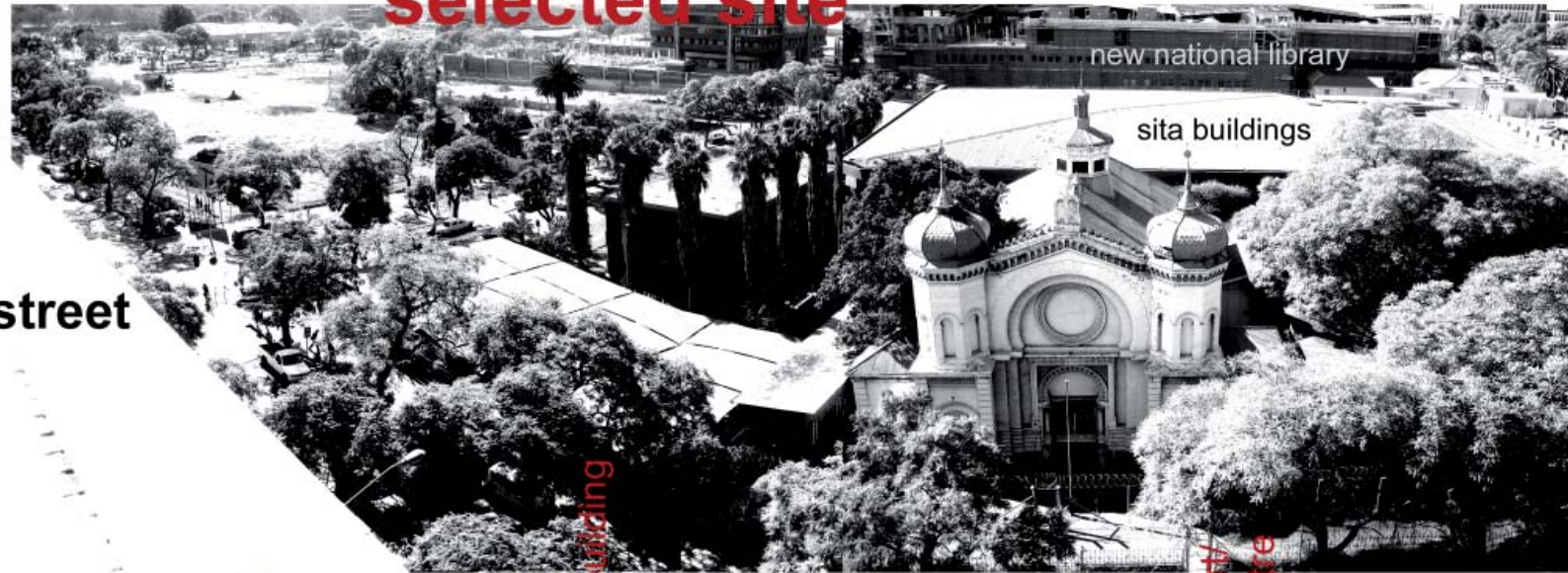
Currently, the selected site on erf no 103 is owned by the Department of Public Works (DPW). The Old Synagogue, built in 1897, and its later additions are situated on the southern edge of the erf. A second-hand car dealership, Struben Street Motors, located on the north-western corner of the intersection, is renting a small portion of the land from the Department. According to the staff at the dealership,¹ Struben Street Motors is in the process of negotiating the purchase of the land from the Department of Public Works. The status of the negotiations is unknown. The site south of the synagogue is vacant and is used for parking, while directly behind the synagogue, the Sita buildings are to be found.

1. Staff at Struben Street Motors March 2007: personal interview

north

selected site

struben street



Pretoria's Climatic Data:

Global Position:

25.77° S & 28.11°E

Average Annual Rainfall:
700-750mm

Sun Angles (12:00 solar time):

Summer solstice: 64.23°
Winter Solstice: 40.73°

Winds:

Summer: predominantly north-easterly, south-easterly
Winter: South-westerly

Temperatures:

Summer max av: 28.6°
Summer min av: 17.4°
Winter max av: 19.1°
Winter min av: 4.5

(Holm 1996:69-73)

1940s

bakery & residential area

department of education

proposed tram station

1913

minister's house

struben street

motors car display area

proposed mixed use building

1950s

additional building

sandwich bar

1987

"old synagogue"

proposed tribunal court

public community centre

1950s

additional building

new national library

sita buildings

Figure 6.01. Panoramic view of site and surrounding context



proposed child/family court

parking area

castle carey clinic

1940s



Figure 6.02. Panagos Building dating from 1940s

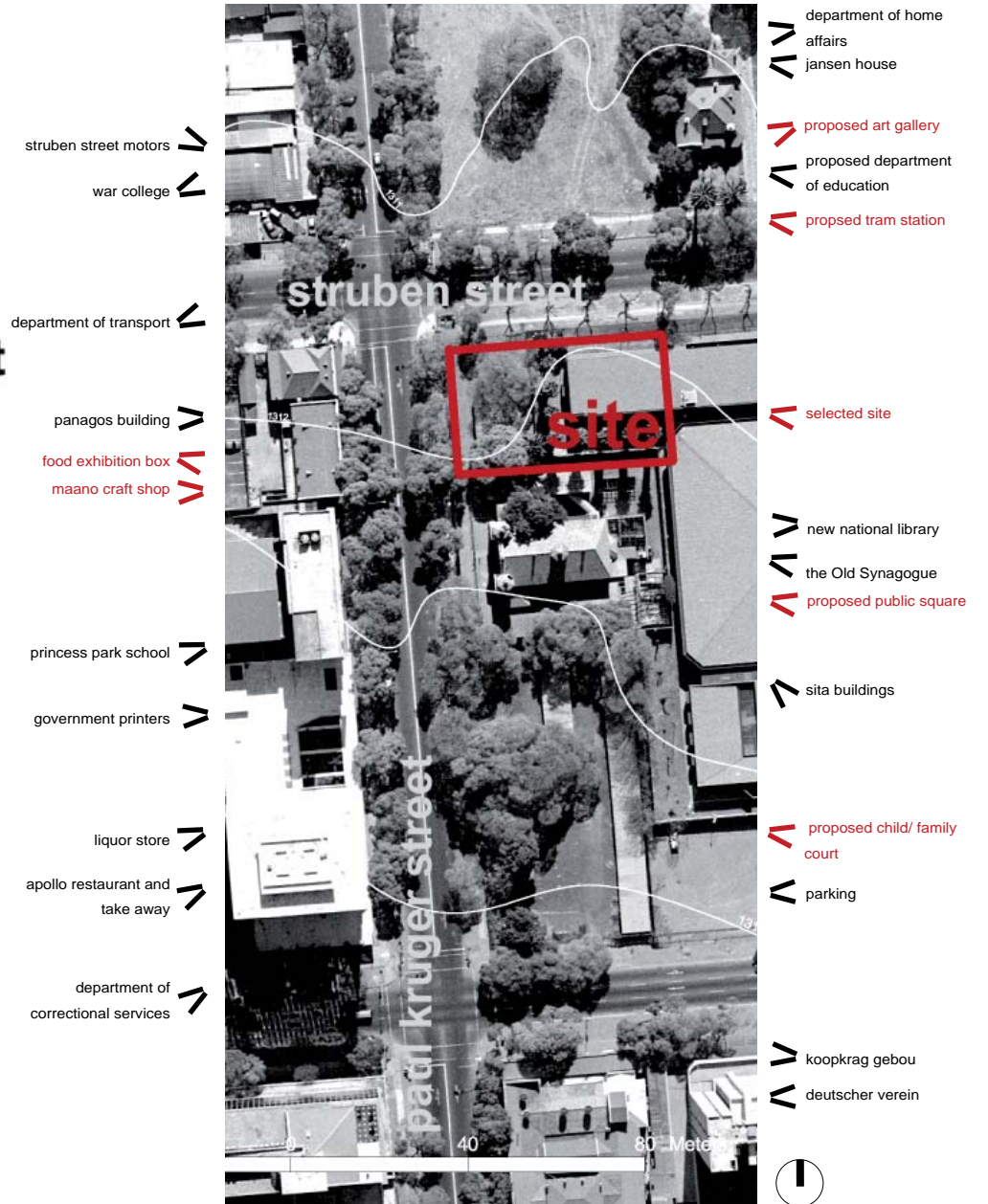


Figure 6.03. Aerial photograph of site and historical context

Site Analysis

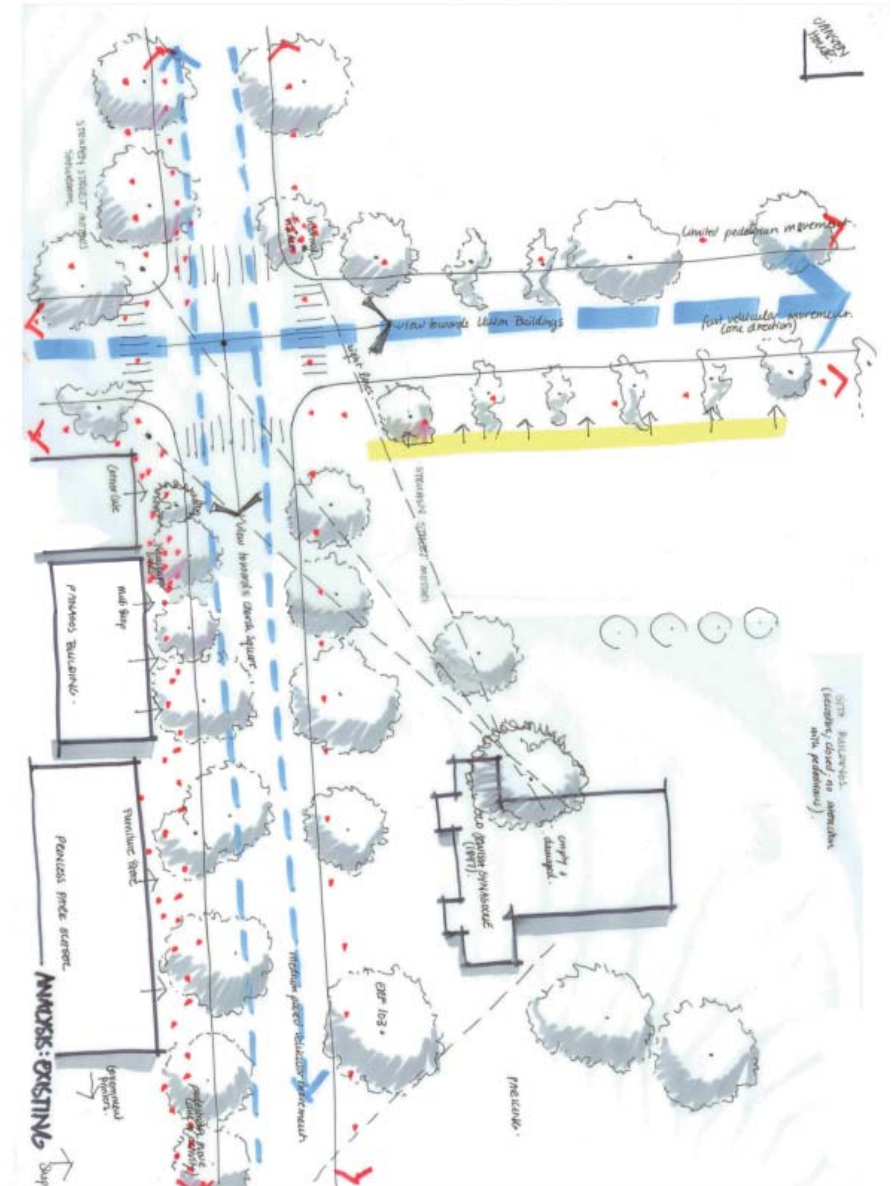


Figure 6.04. Site Analysis showing movement and views in and around the site

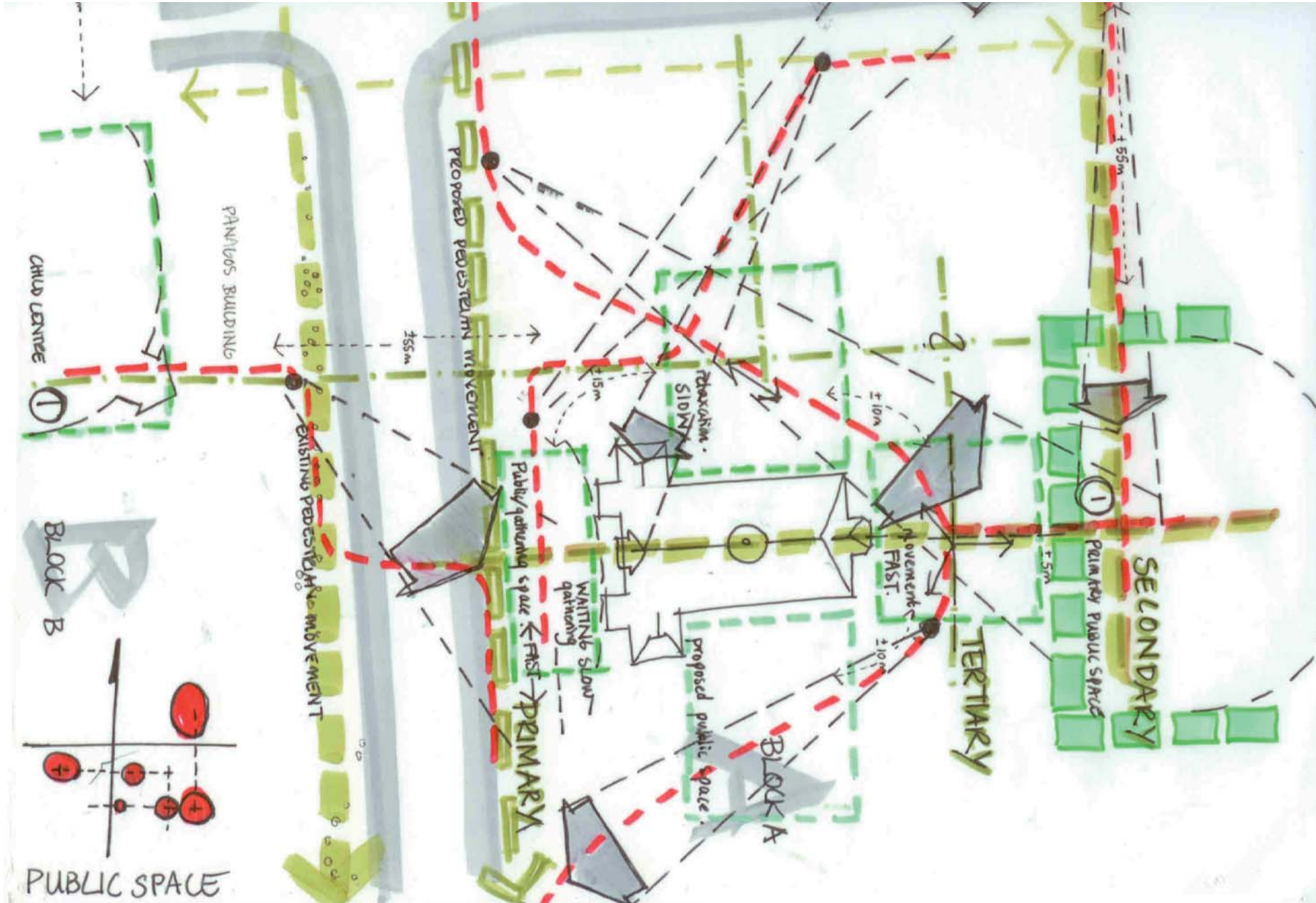


Figure 6.05. Analysis of public spaces and desired relative patterns

Surrounding Buildings

Several buildings of significant heritage value surround the site. The Old Synagogue is the most valuable due to its political history. The Panagos Building, dating from 1880s,² is the oldest remaining commercial building in the city and is situated opposite the site on the south-western corner of the intersection. Other buildings include the Jansen House at 21 Struben Street, dating from 1888, and the War College, previously the Boulevard Hotel.

2. Conflicting sources: according to Meiring (1980:33), the Panagos Building was built in 1880, while Panagos (2007: personal interview) maintains it was built in 1897

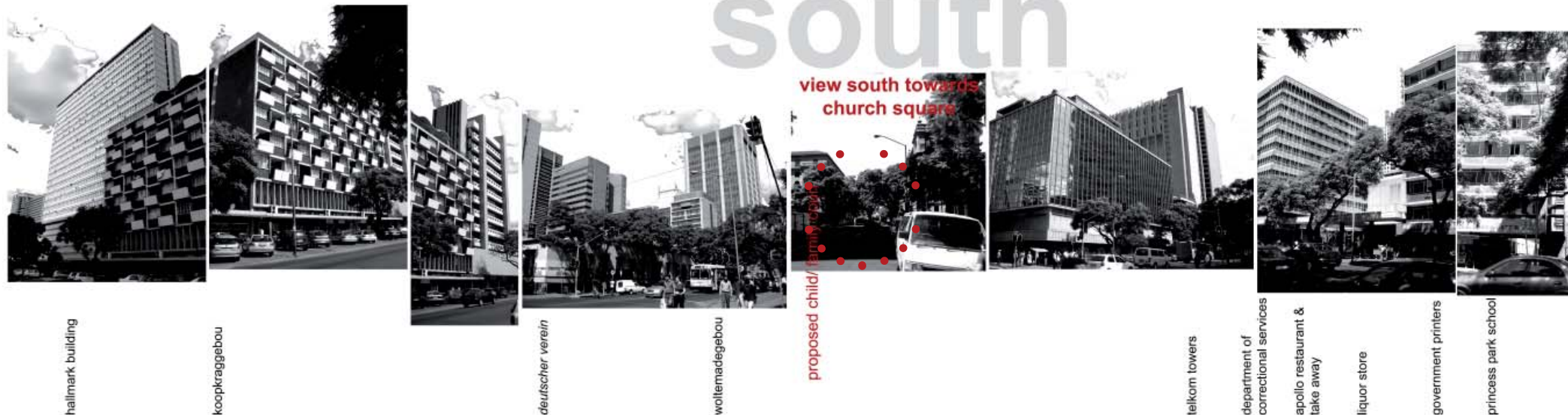
3. National Library of South Africa, Pretoria Campus by the Department of Arts and Culture. Project managers: The DPW; Architects: Jeremy Malan Architects CC, Impendulo Design Architects and Ghandi Maseko Architects CC (Architects Board on site)

The eight-storey Princess Park College is directly opposite the Old Synagogue, from where a second-hand furniture store operates on the ground floor. South of the college, the government printers, a liquor store, the Apollo 11 take-away restaurant and coffee shop, as well as the Department of Correctional Services, are located.

Pedestrian movement on the northern portion of the Paul Kruger Street spine is minimal due to the lack of street-side activities. Most pedestrian movement takes place on the western edge of Paul Kruger Street and peters out as it reaches the threshold of Struben Street. Only those that are en-route to the Belle Ombre Station (located on the north-western fringe of the inner city) continue beyond this point. Most pedestrian traffic (moving north-south) is concentrated along Van der Walt Street due to the taxi rank located at its most northern point.

Government Departments on Struben Street

Several government departments are located in the area. The Department of Transport and the Department of Home Affairs' offices are located on Struben Street, west of Paul Kruger Street, while the new National Library,³ situated at the intersection with Andries Street, was nearing com-



pletion at the time of writing. It has been proposed that the Department of Education is to move to the currently empty north-eastern corner of the Paul Kruger Street intersection,⁴ and be built in a south-facing U-shape that encloses the public space on which the Jansen House is located. Clearing of the site has commenced.

Historic context according to David Panagos

According to David Panagos,⁵ who grew up in one of the apartments on the second floor of the Panagos Building (refer to figure 3.02), the area used to be vibrant, consisting of a fine residential urban grain. Several boarding houses and hotels, which housed temporary workers from the surrounding rural areas, existed in the area. These included the Boulevard and Annexe Rusoord Hotels on Struben Street and the Castle Carey Clinic on the corner of Proes and Paul Kruger Street. The area was pre-

dominantly residential, with small houses lining the streets. Today, only the Jansen House remains. It is here that David Panagos met his wife Anne, who grew up living in the Jansen House. David Panagos remembers the bakery diagonally opposite the Panagos Building and the minister's house where the Old Synagogue's cantor, Mr. Zwick, lived. (refer to figure 7.01)

According to Panagos,⁶ the Annexe Rusoord Hotel was located on the northern edge of Struben Street, approximately four houses down from the Jansen House. There also is a record of the Castle Carey Clinic at no 100 Paul Kruger Street, located on the corner of Proes and Struben streets, south of the synagogue. It also operated as a boarding house for those temporarily employed in the inner city. Today, only the Boulevard Hotel, out of all the buildings dating from that period, remains, albeit with another function

4. Barbir 2007: personal interview

5. Panagos 2007: personal interview

6. Panagos 2007: personal interview

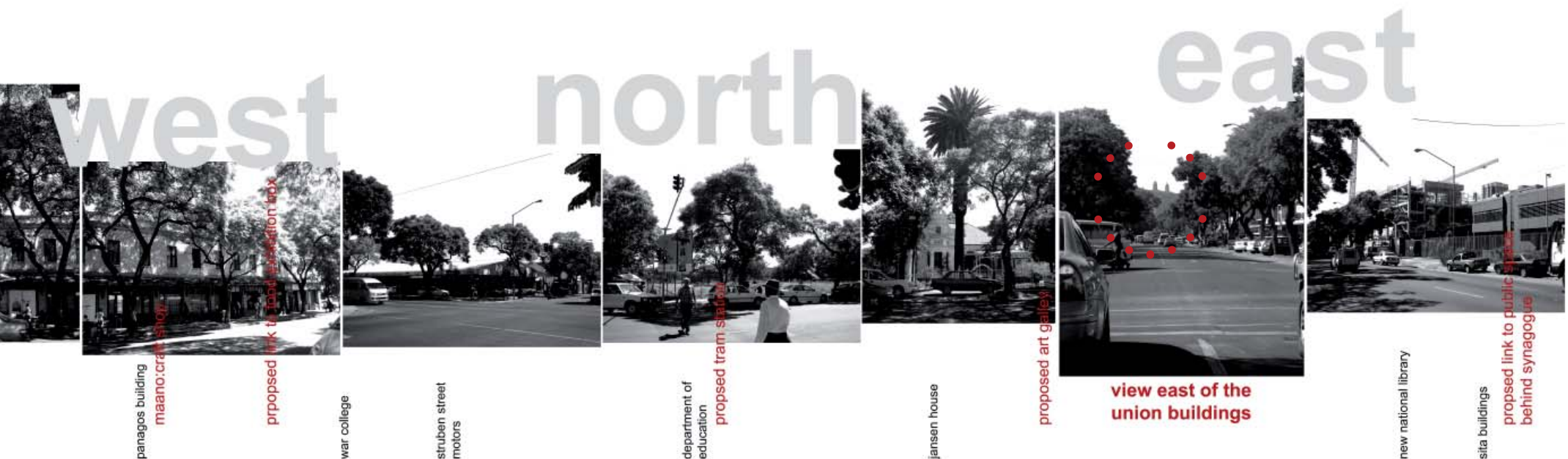


Figure 6.06 Panoramic collage of buildings surrounding site

The Threshold

When approaching the site from the north, building heights are mostly single and double storey. The buildings on site do not generally contribute to the activities in the street. The activities that do take place in this area are more informal in character. This northern portion of the city is scattered with large, empty sites and dilapidated buildings. South of the intersection with Struben Street, the context changes dramatically. While the heights of the buildings increase, the streets become clearly defined by urban edges. The street image takes preference over orientation and allows activities to contribute to the energy on the street. Struben Street, therefore, acts as the threshold between the perceived north and the inner city. It separates the formal from the informal.

The dilapidated Old Synagogue, located within the 'boundary', gives the perception that the more neglected north is encroaching on the inner city.

The synagogue as a symbol of decay

The selected site is located on the boundary between the urban part of the city and the partially neglected northern portion. The Old Synagogue, that embodies religious, cultural and political history and heritage, is symbolic of the decay evident in the north. The building itself is in a dilapidated state and is surrounded by a 3m barbed wire fence after homeless people in search of warmth and shelter set the interior balustrade alight. According to Pyke,⁷ chief architect of heritage assets management at the DPW, Pretorians are aware of the significant value of the building and its ever-increasing decay. Without an appropriate proposal for the building and the required funding to restore and maintain it, the Old Synagogue will remain vacant and will continue to allow the decay of the inner city to persist.

7. Pyke 2007: personal interview



Figure 6.07 Figure ground study





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south

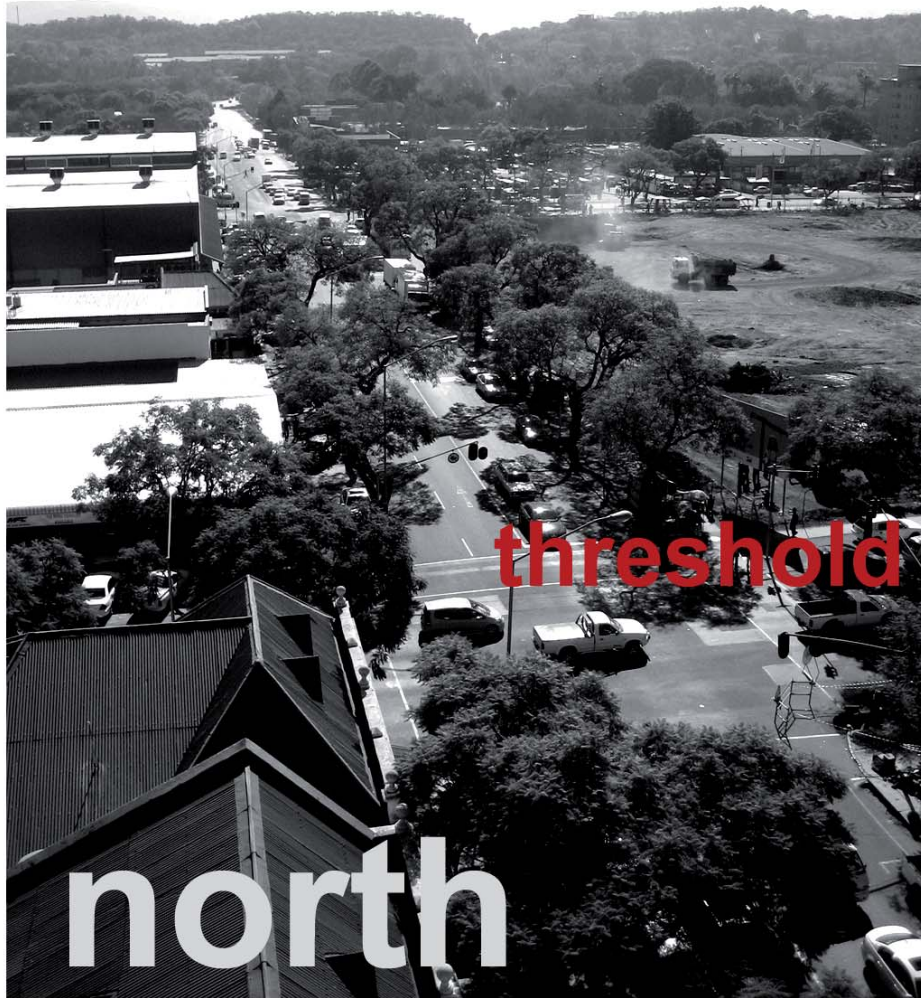


Figure 6.08 View north of threshold



Figure 6.09 View south of threshold

Urban decay in the north of the inner city

The decline of the city

Whereas in the 1940s, Paul Kruger Street used to be a vibrant fine-grained residential urban area, the urban character of its northern section is increasingly weakened. According to Panagos,⁸ it was during World War II that the zoning of this residential area was changed to accommodate light industrial activities such as the manufacturing of helmets. Panagos identifies this change as the start of the degeneration of the area. Since then, proposals for a large motorway interchange, taking up several city blocks, and the clearing of Marabastad, a cosmopolitan 'mixed-race' settlement to the northwest, during the Apartheid era inevitably had an impact on the city. Today, much of the cleared land remains vacant or is informally occupied.

The primary causes of urban decay

In Roberts⁹ *Urban Regeneration: A Handbook*, urban decay is identified as the result of an "urban change event",¹⁰ whereby decisions are taken and the spatial consequences of a local area are either ignored or intentionally not taken into consideration. Roberts refers to this type of decision-making as "dislocated" as the decision-makers are removed from the immediate context. "The survival of an economic activity or a close knit community is often threatened by political whim or professional misjudgement." The author identifies other factors that disrupt the social structure of a community or contribute to the decay of city areas: crime, physical blight, social polarisation, physical decay, changing transportation and accessibility requirements and the difficulty of adapting buildings to accommodate new uses. The range of factors can originate from within the city or can be related to regional influences.

The lack of an integrated vision

The city council's inability to formulate a strong vision for the capital city has allowed the economic relocation to the east to persist. At this stage, while several proposals are on the city council's agenda, priorities seem to change along with changing staff members and their individual interests.¹¹ points out that "the absence of an adequate institutional capacity

The origin of urban decay

Saarinen,¹² in his book *The City: Its Growth, Its Decline, Its Future*, traces the decline of the city back to the Renaissance period when the renewed interest in classical antiquity led to imitation, based on doctrines and formulas rather than creative expression. In contrast, Saarinen¹³ points out that up until and including the medieval period, buildings were conceived three-dimensionally in a specific context and, therefore, the art of building was an indigenous expression of a specific time and place. The consequences were only realised much later: "The real effect appeared during the latter part of the nineteenth century, when free play with imitative forms became proverbial, as irrelevancy between building design and site character became complete".¹⁴ Saarinen, therefore, attributes the decline of the city to the degradation of architectural form expression, which, due to the spirit of "imitation" and "irrelation", resulted in superficial stylistic decoration. This is linked to the divorce of architecture from town planning, resulting in solutions no longer addressing the spatial character of the city as a whole.

8. Panagos 2007: personal interview

9. Roberts (2005:24)

10. Roberts (2005:23)

11. Erasmus 2007: lecture to architectural students at the University of Pretoria

12. Saarinen (1965:79)

13. Saarinen (1965:78)

14. Saarinen (1965:80)

The following table summarises the evolution of urban regeneration over the last 50 years. While this table focuses on Europe, primarily the United Kingdom, it clearly illustrates the shift in focus and approach. The UK remains the leader in regeneration policy development and project implementation and, while many of the below identified trends are not directly related to South Africa's scenario, we are inevitably heading in the same direction.

Period/ Policy Type	1950s Reconstruction	1960s Revitalisation	1970s Redevelopment	1980s Redevelopment	1990s Regeneration
Major strategy and orientation	reconstruction and extensions of older town and often based on a 'masterplan'; suburban growth	continuation of 1950s theme; some early attempts at rehabilitation	focus on <i>in-situ</i> renewal and neighbourhood schemes; still development at periphery	many major schemes of development and redevelopment; flagship projects; out of town projects	move towards a more comprehensive form of policy and practice; more emphasis on integrated treatments
Key actors and stakeholders	national and local government; private sector developers and contractors	move towards greater balance between public and private sectors	growing role of private sector and decentralisation in local government	emphasis on private sector agencies; growth of partnerships	partnership the dominant approach
Spatial level of activity	emphasis on local and site levels	regional level of activity emerged	regional and local levels initially; later more local emphasis	in early 1980s focus on site; later emphasis on local level	reintroduction of strategic perspective; growth of regional activity
Economic focus	public sector investment with some private involvement	continuing from 1950s with growing influence of private investment	resource constraints in public sector and growth of private investment	private sector dominant with selective public funds	greater balance between public, private and voluntary funding
Social content	improving housing and living standards	social and welfare improvement	community-based action and greater empowerment	community self-help with very selective state support	emphasis on the role of community
Physical emphasis	replacement of inner areas and peripheral development	some continuation from 1950s with parallel rehabilitation of existing areas	more extensive renewal of older urban areas	major schemes of replacement and new development 'flagship schemes'	more modest than 1980s; heritage and retention
Environmental approach	landscaping and some greening	selective improvements	environmental improvement with some innovations	growth of concern for wider approach to environment	introduction of a broader idea of environmental sustainability

Table 3.01 'The evolution of urban regeneration' (Roberts 2005:14)

to intervene in the cycle of physical decline has proved to be a major impediment to the regeneration of many urban areas."¹⁵ While some departments have deliberately moved their head offices to the northern part of the city, such as the proposed Department of Education and the New National Library, both of which are currently under construction, other departments completely contradict the effort by joining the economic relocation to the east of Pretoria. This disunity contributes to the erosion of Pretoria. "Inevitably, the responses to this challenge [...], mirror the socio-political and economic values and structures of urban society"¹⁶

Key factors of degeneration

The following five key factors¹⁷ help identify the origin of past and current problems. These factors are all evident in the area of the selected site:

- Physical conditions and social response
- Housing and health
- Social welfare and economic progress
- Containing urban growth
- Changing urban policy

15. Roberts (2005:28)

16. Roberts (2005:11)

17. Roberts (2005:10)

The Re-Kgabisa Tshwane Project

One of the current proposals for the inner city of Pretoria is the Re Kgabisa Tshwane Project,¹⁸ which is led by the DPW, the Department of Public Service and Administration (DPSA) and the City of Tshwane Metropolitan Municipality (CTMM). The objective of the project¹⁹ is to “prevent inner city deterioration and promote inner city urban renewal”. The proposal, which addresses the Paul Kruger Street spine is in line with the Tshwane Inner City Strategy which addresses Tshwane as a whole:

“The revitalisation of Tshwane in the form of improved infrastructure and urban management is core to the programme which will enhance the city’s image and reputation as a leading African capital city.”

The proposal addresses issues such as the allocation of public space (which is lacking in the northern portion of the city), increased provision of infrastructure and services, and the accommodation of national government departments.

Proposals for Paul Kruger Street Spine

The proposal includes the following: The Museum Park Precinct, which consists of the provision of a green public space to be named Station Square directly in front of the Pretoria Main Station Building at the southern anchor of the Paul Kruger Street spine, as well as the Museum Square which incorporates the re-design and extension of what is currently Pretorius Square. In the north, the Paul Kruger North Precinct includes the proposal for a large, L-shaped public space to be named Synagogue Square which wraps around the existing Sita buildings. Additionally, the Struben Street improvement suggests a renewed focus on the urban quality surrounding the intersection of Paul Kruger and Struben streets.

This project is in reaction to the proposal of Synagogue Square for the selected site.

18. The project commenced under the banner of the Tshwane Inner City Project (TICP) and had its official launch on 9 & 10 November 2005 (The Re-Kgabisa Tshwane Project 2007: <http://www.rekgabisatshwane.gov.za/about.html>)

19. The Re-Kgabisa Tshwane Project 2007: <http://www.rekgabisatshwane.gov.za/about.html>

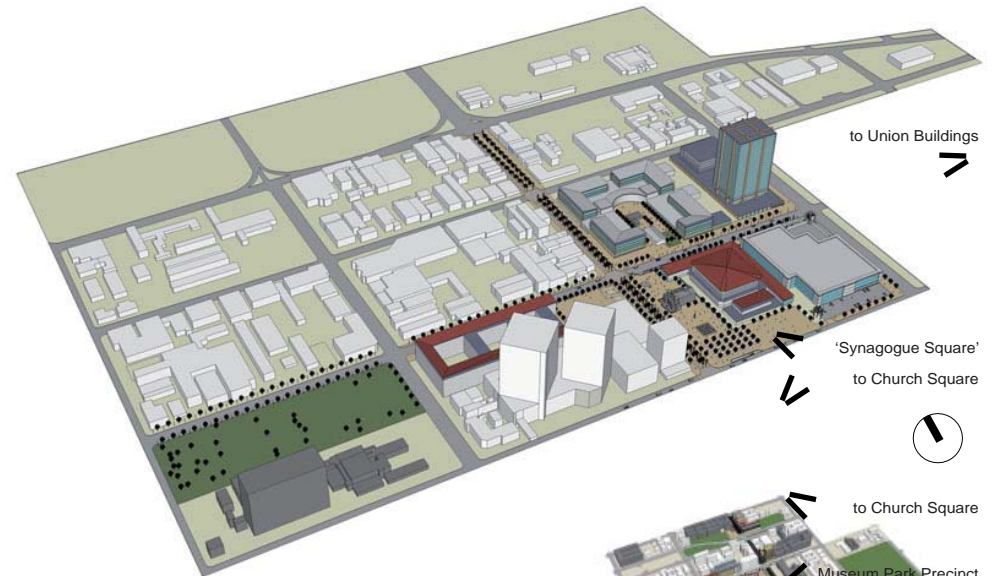


Figure 6.10 Proposals for the Paul Kruger Street North Precinct



Figure 6.11 Proposals for the Paul Kruger Street South Precinct



Figure 6.12 Synagogue Square



Figure 6.13 Struben Street



Figure 6.14 Department of Education

Inadequate provision of Public Space

In an urgent attempt to provide public space, the city council's proposal simply addresses the statistical provision of public space. The criteria and activities that truly determine the 'publicness' of an open space within an urban context are neglected. The proposed Synagogue Square does not accommodate or generate activity on the site, merely creating another large void within the city. Similarly, the large, monotonous Department of Education building decreases the activity that could potentially take place on the street. This has a direct impact on pedestrian movement as it decreases surveillance and, therefore, lowers the sense of safety and security on the street.

“[...] So many places in our modern cities are grossly oversized. It is as if planners and architects have a strong tendency, whenever in doubt, to throw in some extra space, just in case, reflecting the general uncertainty concerning the proper handling of small dimensions and small spaces.

Gehl 1987:93

Criticism of the Proposal

The proposal for the northern portion of the Paul Kruger Street spine seeks to encourage investment interest in the inner city through the relocation of various national departments to the inner city. The focus of the proposed frameworks is on the urban renewal of the area. The historical value of the city has been identified:²⁰

“ The City of Tshwane, and the Inner City area in particular, constitutes a rich South African concentration of historic and cultural places (reflecting different periods of our history and cultures), and government and other institutions.”

But the response to the existing views and heritage, considering the richness thereof at the junction of Paul Kruger and Struben streets, is neglected. The existing architectural heritage buildings are 'monumentalised', leaving them isolated on a public square and completely stripping them of their original context.

A strategy for crime prevention

According to the research project²¹ conducted by the CSIR and the Institute for Security Studies (ISS), the planning and design of public spaces has a major impact on safety and security. Five principles that are crucial to establishing how the physical environment “either reduces or increases the opportunities for crime” have been identified:

- Surveillance and visibility
- Territoriality
- Access and escape routes
- Image and aesthetics
- Target hardening

These principles have been considered in the design of the proposed building adjoining the Old Synagogue. The approach to the selected site requires careful consideration of the allocation of public space and its activation.

20. Tshwane Inner City Development and Regeneration Strategy (2006:4)

21. Kruger et al (2001:33)



Formulating an approach

Urban Precedent: Long Street, Cape Town

In search of an appropriate approach to tackling the issue of providing public space and integrating the existing Old Synagogue into the current context of the city of Pretoria, Long Street in the centre of Cape Town proved to be a valuable case study. According to various accommodation managers,²² approximately six to 10 years ago, the street was in a dilapidated state. The turnaround came when, over a period of time, several low-cost temporary accommodation 'backpackers' targeting international tourists, located themselves on Long Street. Due to its central location and ease of access to public transport, this move allowed Long Street to come alive with people and activity, which, in turn, further attracted growth and activity. Today, Long Street is a buzzing accommodation, shopping and entertainment spine that is frequented by both local residents and international tourists.²³

The success of Long Street can not only be attributed to the facilities available on the street, but also to the fine urban grain that generates an interest on a pedestrian level. Furthermore, the integration of the historic character of the street, typical of the city of Cape Town, into the contemporary scenario contributes to the current character and the interest generated when one visits the city.

Gehl discusses the weaknesses of 'modernised' cities with regard to four main principles. These points have each been successfully dealt with on Long Street in Cape Town and should form the basis of the approach for Paul Kruger Street in Pretoria, which has a similar potential.

Dispersion rather than assembly

Firstly, Gehl²⁴ criticises activities that disperse human activity rather than assemble it. "Big buildings with long façades and few visitors mean an effective dispersal of events". Such buildings, including parking garages, petrol stations and large financial institutions, contribute to decreasing the activity on the street, which, in turn, leads to the deterioration of the urban environment as they effectively become voids in the urban fabric. The result²⁵ is "the disintegration of living public spaces and the gradual transformation of the street area that is of no real interest to anyone" and this is "an important factor contributing to vandalism and crime in the streets".



Figure 6.15



Figure 6.16



Figure 6.17

Figure 6.15 Carnival Court Backpackers

Figure 6.16 Cat & Moose Backpackers

Figure 6.17 Long Street Backpackers

Figure 6.18 Daddy Longlegs Boutique Hotel

Figure 6.19 View of Long Street

Figure 6.20 Old & new complementing the urban character

22. Various backpacker managers on Long Street, Cape Town May 2007: personal interviews

23. refer to Appendix A for survey of local backpackers

24. Gehl (1987:97)

25. Gehl (1987:78)



Figure 6.20



Figure 6.18



Figure 6.19

This criticism is particularly relevant to the proposed Department of Education (refer to figure 3.13), which covers the entire western edge of the city block north of the selected site and turns its back on the street. The criticism of the department's building is primarily directed at the monotony and the sheer size of the proposal. In contrast, Gehl²⁶ suggests that street fronts should only consist of “narrow units and many doors” containing the most interesting activities.

Monotony

Secondly, Gehl²⁷ points out that the segregation of different activities leads to monotonous social groups. He discusses the importance of integration:²⁸ “The rejection of monofunctional areas is a prerequisite for the integration of various types of people and activities”. This argument supports the introduction of a mixed-use building into the current context as a catalyst for urban regeneration.

Speed

Gehl²⁹ suggests that successful social integration requires the integration of movement into the social life of cities. In South Africa, the transition from fast to slow motion takes place at the individual's doorsteps, however, a more gradual transition and a varied form of transportation would allow integration, while simultaneously promoting stimulating environments and safety. This could be achieved by public transport or by encouraging bicycle transportation along with promoting pedestrian movement.

Similarly, the sudden transition from fast to slow movement sharply demarcated borders emphasise the sudden transition from the public to private domain. The opposite is desirable:³⁰ “Flexible boundaries in the form of transitional zones that are neither completely private nor completely public, on the other hand, will often be able to function as connecting links, making it easier, both physically and psychologically, for residents and activities to move back and forth between private and public spaces, between in and out”.

Enclosure

Lastly, the enclosure of public spaces and activities narrows the parameters for human sensory experiences and results in depopulated, duller and dangerous public spaces. In contrast, in South Africa, enclosure has become the only manner of dealing with the issues of security. Gehl³¹ expresses his surprise about how many urban renewal projects neglect to activate space within and around buildings and, thereby, reduce their impact through decreased visual accessibility.

- 26. Gehl (1987:97)
- 27. Gehl (1987:104)
- 28. Gehl (1987:109)
- 29. Gehl (1987:111)
- 30. Gehl (1987:115)
- 31. Gehl (1987:123)

Discussion

The role of public space

While it is commonly accepted that most South African cities experience a lack of public space, the provision thereof must function successfully, rather than simply fulfilling a statistical requirement. The following discussion focuses on the role of public space in the city and the resultant impact, relating to the quality of space. The discussion focuses on Jan Gehl's *Life Between Buildings: Using Public Space*. While the discussion focuses on Western European and American cities, the issues raised are common in most South African cities and, therefore, address the problems³² of inner cities in general.

Definition of "outdoor activities"

Gehl³³ differentiates between three different types of outdoor activities: necessary activities, optional activities and resultant activities. Although necessary activities take place regardless of weather conditions and the quality of the physical environment, Gehl points out that optional activities are "especially dependant on exterior physical conditions".³⁴ Resultant activities are, therefore, the spontaneously occurring social interactions and activities that take place as a result of optional activities.

" Life between buildings compromises the entire spectrum of activities which combine to make communal spaces in cities and residential areas meaningful and attractive." Gehl 1987:16

The importance of low-intensity contacts

The lowest intensity contact (refer to figure 3.21) is only possible in a public place, and the lack of this form of passive contact makes the "boundaries between isolation and contact become stronger". These fundamental contacts form the basis of social interaction and an abundance thereof, Gehl³⁵ terms a "living" city. Therefore, by accommodating life between buildings, one allows for the natural development of higher intensity contacts, while simultaneously providing information on the social environment and acting as a stimulating experience and a source of inspiration.³⁶ Furthermore, as the number of outdoor activities increases, the frequency of interactions increases as well.³⁷ According to Gehl, this is in contrast to most North American cities and 'modernised' European cities.³⁸

32. For further information on the urban problem refer to Roberts (2005:24)

33. Gehl (1987:11-13)

34. Gehl (1987:13)

35. Gehl (1987:23)

36. Gehl (1987:19)

37. Gehl (1987:13)

38. Gehl (1987:31)

	quality of the physical environment	
	poor	good
necessary activities	●	●
optional activities	•	●●●
resultant activities	•	●

Figure 6.21 Graphic representation of the relationship between the quality of outdoor spaces and the rate of occurrence of outdoor activities (Gehl 1987:13)

Considering the ideal climatic conditions in South Africa, one would imagine that outdoor public spaces would be in abundance and that social interaction in our cities would be vibrant. Sadly, this is not so. Not only do most South African cities lack the adequate provision of public space, but due to the dominance of private motorised transport, social interaction between the multitudes of different inhabitants is limited.

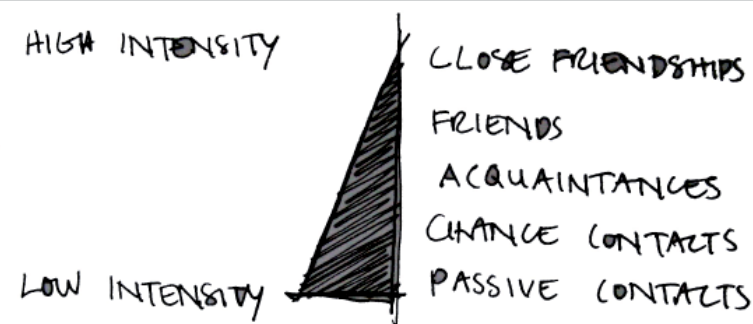


Figure 6.22 Hierarchy of social interaction (Gehl 1987:17)

According to Gehl,³⁹ “[...] all experience to date with regard to human activities in cities and in proximity to residences seems to indicate that where a better physical framework is created, outdoor activities tend to grow in number, duration and scope”. In addition, people and human activities attract one another. Therefore, life between buildings is a “self-reinforcing” process.⁴⁰ (refer to figure 6.23)

The origin of poor public spaces

Housing typologies

The development of the single-family housing typology;⁴¹ which emerged in Scandinavia, the United States of America, Canada, Australia and South Africa; created desirable outdoor conditions but reduced communal outdoor areas, resulting in the phasing out of the “life between buildings”. In South Africa, as in other countries, shopping malls have become virtually the only point of contact with the outside world for many urban and suburban dwellers.

Motorised transport

In addition, the increase in private motorised transport is directly linked to the decrease in outdoor activity,⁴² as well as the decay of the urban environment. Gehl⁴³ attributes this to the increased speed of movement that results in a lesser attention to detail. Thus, the urban environment responds to high-speed transport rather than individual pedestrian movement, which is characterised by walls, long distances, high speeds, multiple levels and orientation away from others.

39. Gehl (1987:39)

40. Gehl (1987:75-6)

41. Gehl (1987:49)

42. Gehl (1987:37)

43. Gehl (1987:74)

The focus of the synagogue is on the beautifully detailed main façade that faces the street. At the time of construction, the primary form of transport was on foot, allowing passers-by to appreciate the fine detailing of the main façade of the building.



Figure 6.23 Activating space: Shop window Band



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The Micro Scale

The following section deals with the selected site , its history and its current state. The objective is to give an overview of the factors that have influenced decision-making with regard to the functions and activities to be introduced.

Pretoria's first Synagogue

Simon Feinberg and Herman Manneschewitz bought the site, then registered as no 74 Market Street, on 11 December 1895 from Thomas Patterson for the purposes of erecting a synagogue to serve the growing Jewish community in Pretoria. Previously, the Jewish community that was established in the late 1800s had held its services in various homes, hotels and halls. At a meeting held at the Fountain Hotel in August 1897, it was decided that a synagogue should be built to serve the needs of the growing Jewish community. The synagogue was designed to seat 359 men and 150 women. Ibler & Beardwood were appointed as architects, while Mr Köckel was appointed as the contractor. Construction commenced on 1 October 1897. The Jewish entrepreneur, industrialist and philanthropist, Sammy Marks was instrumental in ensuring the completion of the project due to his substantial monetary and material contributions over an extended period.¹

According to the South African Jewish Board of Deputies,² the double-storey Basilica-type structure was built with an evident Byzantine and Moorish influence. Due to a lack of funds, the western façade (front) of the building has a distinctly different character to that of both the north and south façades. The western façade originally consisted of beautifully alternating bands of different coloured face brick, while both the northern and southern façades consist of plastered and painted brickwork.³ The intricately detailed western façade is symmetrical about the main entrance to the building. At that time, it was the fourth synagogue to be built in the Transvaal.⁴

1. SAJBOD ([S.a.]:41)

2. SAJBOD ([S.a.]:44)

3. Remmers & Schütte (2005:7)

4. SAJBOD ([S.a.]:48)

5. Tzonis (2004:24)

6. *Tiempo Isrealitico*, Florence (1882); *The Great Synagogue*, Stockholm, (1870) & the *Oranienburgerstrasse Synagogue*, Berlin (1866) (Wigoder 1986:166-175)

7. refer to Appendix B for drainage plan

8. SAJBOD ([S.a.]:49)

9. SAJBOD (1930:48-51)

Jewish Architecture

According to Tzonis,⁵ Jewish architecture of the nineteenth century was commissioned to be in an “orientalist” or “Eastern Mediterranean style”. This style is said to have originated from the eighteenth century when German philosophers classified Jewish culture as primarily auditory as opposed to the more visual approach of Christianity. As Judaism forbids the depiction of human form in its religious houses, “the geometrically derived style must have seemed appropriate”. This international trend is evident in the stylistic elements of the Old Synagogue.

This style was widely adopted in Europe at the time. Examples⁶ of such synagogues include the *Tiempo Isrealitico*, Florence; the *Great Synagogue*, Stockholm and the *Oranienburgerstrasse Synagogue* in Berlin.

Later additions

It was only in 1913 that the plans for a minister's house on the same site were approved by the city council.⁷ Simultaneously, the erection of a toilet block on the southern boundary of the site was approved as the original building had no sanitary infrastructure.

Ministers at the Synagogue

The first minister for the Pretoria Jewish community was Reverend E. Jaffe, to whom the earliest references date back to 1898. He resigned in 1901 and in 1902, Mr. Mordechai Rosenberg from Liverpool was appointed as “minister, mohel, preacher, reader and teacher”.⁸ In 1903, Reverend Rosenberg resigned, but was persuaded to remain active at the synagogue with the promise of a free house. Eventually, he left to join the Miriam Marks School, built by Sammy Marks in memory of his mother, where he later acted as headmaster. He served until 1911, when Rev. Lewis Phillips succeeded him.⁹



Figure 7.01 The minister's house



Figure 7.02 Oranienburgerstrasse Synagogue, Berlin

The 'special' Supreme Court

The Minister's House

Whether or not Reverend Rosenberg ever lived in the promised free house on the site, is unknown, as the records of the City Council of Pretoria¹⁰ show building plans for the house only being approved on 7 June 1913. In 1913, Reverend L. Phillips is registered as living at no 56 Market Street, and by 1943, there is only a record of the synagogue. The date the minister's house was demolished remains unknown. On 2 January 1947, plans for the proposed garage for the Hebrew congregation were approved.¹¹ By 1965, the Annexe Rusoord Hotel was registered at the above-mentioned address.

With the rise of Apartheid, in 1952, the Department of Public Works expropriated the entire block for the purposes of erecting a new Supreme Court.¹² During this period, the Pretoria architect, Gordon McIntosh was appointed to design the new court.¹³ In the meantime, between 1958 and 1977, the synagogue functioned as a 'special' Supreme Court in order to deal with the rising black opposition movements. In preparation for its new function, the rose window above the main entrance was removed and the entire building was painted white. Several other additions, such as holding cells and toilets, were made to the synagogue.¹⁴ The plans for the new Supreme Court were withdrawn due to their discriminatory design, as ruled by the presiding judge, Mr Justice Rumpff. He stated his reason for the withdrawal being that all people were equal before the law.

A new Synagogue on Pretorius Street

In the same year, the Jewish community relocated to the new and bigger Great Synagogue in Pretorius Street. While the Old Synagogue had met its requirements as a place of learning and spiritual worship, the building had lacked the space for activities of a more social character. By then, due to the changing urban environment, most of the Jewish community had moved out of the inner city, which was originally a residential area.

10. Lochhead's Guide & Handbook & Directory of Pretoria 1913

11. refer to Appendix C

12. Vos & Associates (1995:6)

13. Vos & Associates (1995:10-12)

14. Vos & Associates (1995:10)



Figure 7.03 'Synagogue before Jakarandas' (Panagos:2007)

Four High Profile Trials

The first Treason Trials

On 19 December 1956, the Treason Trial of 156 Congress Alliance leaders,¹⁵ including Nelson Mandela, was opened at the Drill Hall in Johannesburg. In 1958, the state moved the case to the synagogue in Pretoria in order to deter the rising number of supporters.¹⁶

“For the next five years, the state vainly attempted to prove in court that a communist-inspired conspiracy to violently overthrow it had been prepared by the Congress Alliance”.¹⁷

he was accused of alleged involvement in activities of treason and terrorism. His sentence was later overturned on appeal. Several years later, in 1977, the inquest into Steve Biko’s death, the leader of the Black Consciousness movement, began at the Old Synagogue.²³

The Synagogue after 1977

Subsequently, the synagogue was used as a warehouse for the National Cultural History Museum,²⁴ and today, the building is empty. However, there are various parties currently interested in the future use of the Old Synagogue.²⁵

“Shortly before the case resumed, the state played another unpleasant trick on us. They announced that the venue for the trial was to be shifted from Johannesburg to Pretoria. The trial would be held in an ornate former synagogue that had been converted into a court of law.” Mandela 1994:261

Finally, on 29 March 1961, the trial ended¹⁸ and all 156 accused were acquitted. The sight in front of the synagogue when the verdict was at last given has been described as a “scene of wild euphoria”. At that point in time, it had been the longest political trial in South African history.

15. Mandela (1994:235)

16. Mandela (1994:261)

17. Lodge (1990:76)

18. Lodge (1990:76)

19. Mandela (1994:384)

20. A separate organisation leading the sabotage campaign formed in 1961; translation meaning Spear of the Nation

21. Lodge (1990:237)

22. Barbara Buntman, honorary research associate at the Wits School of Arts, University of Witwatersrand, Johannesburg (Buntman 2006:2)

23. De Jong (1998:48)

24. Le Roux (1993:33)

25. Pyke 2007: personal interview

The second Treason Trials

On 5 August 1962, on his return to South Africa, Nelson Mandela was re-arrested. After the arrests made at Liliesleaf Farm in Rivonia, Mandela and others were tried due to their activities associated with *Umkhonto we Sizwe*.²⁰ On 7 November 1962,²¹ Mandela was sentenced and he was eventually relocated to Robben Island in 1963, where he spent most of his years of captivity.

The Trial of the Anglican Dean of Johannesburg

According to Buntman,²² in 1971, the trial of the Anglican Dean of Johannesburg, Gonville French-Beytch took place at the synagogue, in which



Figure 7.04 Supporters in front of the Syagogue during the Treason Trials

The irony of the conversion

The building, having been deconsecrated in 1952 and replaced by a 'special' Supreme Court from 1958 onwards, as well as other functions since then, continues to be referred to as the Old Synagogue. According to Buntman,²⁶ this term originated from the time of the relocation of the Jewish community from the Old Synagogue to the new Great Synagogue on Pretorius Street. The identification of the building at the time, by its original function, points to the neutral connotation of the name and an unsuccessful conversion to a court of law. Overall, little objection was raised by the Jewish community to the interchangeable usage of court and Old Synagogue, but in 1958, Rabbi Louis Rabonowitz did point out his concern that the Jewish community was being associated with the proceedings that were taking place at the synagogue.

The irony of the conversion of the Old Synagogue's function from a sacred religious purpose to the fundamentally opposed purpose of an Apartheid court furthering the discriminatory nature of the Apartheid Regime, lies in the fact that "Judaism is very much a faith and culture centred on law".²⁷ Additionally, the irony is accentuated in the close association of this 'special' court, a symbolic icon of the government with its early anti-Semitic sentiments, to a historically discriminated against people. Furthermore, while the Jewish community adopted an apolitical stance toward Apartheid,²⁸ many Jewish individuals actively joined the struggle for democracy. Buntman points out the noteworthy presence of Jewish defendants such as Sydney Kentridge, amongst others, during the Treason Trials.²⁹

The difficulty of proposing a new function

When one looks back on the ironic sequence of events that took place in the Old Synagogue, one begins to understand the difficulty of proposing a new function for the ever-deteriorating synagogue and its surrounding sites. Furthermore, the contradictory nature of the various past functions of the building pose a challenge when attempting to preserve the diverse memories associated with the place.

26. Buntman (2006:2)

27. Buntman (2006:2)

28. Buntman points out that this stance may have been the result of a mixture of fear (with WW II still fresh in many people's minds) and an attempt to avoid mixing religion with politics. It was only in 1988 that Chief Rabbi Cyril Harris "emphasised Jewish values as antithetical to Apartheid" (Buntman 2006:8)

29. Buntman (2006:6)



Figure 7.05 Gathering in front of the Synagogue during the Treason Trials



Physical Assessment of the Building

According to Pyke,³⁰ the Department of Public Works is prepared to undertake initial restorative work to prevent further decay of the Old Synagogue. Several assessments of the building have been made:

- In 1995: Nigel Vos and Associates Architects: Department of Public Works: Restoration of Old Jewish Synagogue, an assessment for the DPW
- In 2005: Remmers & Schütte Architects: Old Jewish Synagogue: Assessment of Physical Condition Interim Report, an assessment for the DPW
- In 2006: Remmers & Schütte Architects: Pretoria - Old Jewish Synagogue: Halting Decay and Deterioration and Stabilizing the Building: Schedule of Essential Works, an assessment for the DPW

The initial assessment, as documented by Remmers & Schütte,³¹ suggests that, even though the building is in a “state of disrepair”, the basic structure of the building remains in a good and stable condition. The roof is in a bad state and interior finishes have been removed or damaged. Most of the damage is due to a lack of maintenance, vandalism and exposure to the elements. According to Remmers & Schütte, elementary restorative work is estimated at R 3 648 000.

Proposal

Over the last decade, several proposals for the building have been made.³² In line with the group framework for the northern portion of the Paul Kruger Street spine, it is proposed that the Old Synagogue should function as a public venue for hire – a place for public debate and community awareness events. It will also be used by the proposed child/family court, south of the synagogue, as a tribunal court. The objective of the proposal is to allow public access to this historic building. Rather than symbolising the past, the building is to be actively integrated into contemporary public life establishing its significance for future generations.

In addition, it is important that the synagogue contributes to activating the space around it. Thus it is proposed that the northern facade is partially removed allowing, when necessary, for events within the synagogue to spill out onto the proposed public space.

30. Pyke 2007: personal interview

31. Remmers and Schütte (2005:4-11)

32. refer to Appendix D

Literature Review

The Old Synagogue, being one of the oldest buildings in Pretoria (built before the Union Buildings), not only has architectural value, but, due to it being the only building in the city built in the late 19th century Byzantine Style, it also gives an indication of the large population of immigrant communities that settled in South Africa (related to the gold and diamond rush, people fleeing Europe after WW II and due to established trade routes). In addition, with its conversion to an Apartheid court, the building is representative of several cultures as well as different periods of South Africa's history.

Today's challenge lies in proposing an appropriate function for the dilapidated synagogue that will re-integrate the building into contemporary (and future) city life by allowing the citizens of Pretoria to embrace and value their history and heritage that is embodied in the building. This includes proposing meaningful spaces around the synagogue (and other heritage buildings in the area) that contribute to the existing context without weakening the inherent character of the place.

There is a sense of urgency in restoring the Old Synagogue as Vos¹ points out in his assessment of the building: "If this gem of a building which is the only building of this magnitude in the Byzantine Style in Pretoria is not restored promptly, accumulating damage at the current tempo which is being maintained and accelerating, only the brick structure will remain within a relatively short period of time." In addition, younger generations, removed from the history of the building, are increasingly unaware of its significance.

1. Assessment: Department of Public Works: Restoration of Old Jewish Synagogue, Pretoria. Commissioned by the DPW, conducted by Nigel Vos and Associates Architects, September 1995



Determining a contextual response

Architecture in Context - Brolin

Brolin's *Architecture in Context: Fitting new Buildings with old* addresses the debate on architectural style and the difficulty of relating a new building to an existing context. As this book was published in 1980, the author² writes from a post-modern perspective and exposes his frustration with the multitude of rigid modernist buildings of the pre-1980s. The modern movement rejected all historical styles that preceded it in such a manner that any conscious response to an existing building would seem absurd. The author is also eager to point out that at the root of offensive and contextually inharmonious buildings lies the modern movement and its ideologies.

The "less is more"³ criterion is epitomised by the modern movement. It is this principle-driven period that, according to Brolin,⁴ caused societies to react with a "militant conservatism". In order to avoid this, he calls for the teaching of the craft of architecture⁵ rather than an ideology that brings with it the fear of stepping out of line.

2. Brolin (1980:13)

3. Expression termed by Mies van der Rohe (1886-1969), German pioneer architect and designer of the modern movement.

“If a design does not stand out from its neighbours, most believers in modern architecture seem to feel it has failed: it is neither original nor creative.” Brolin 1980:7

4. Brolin (1980:17)

Relating a new building to an existing context

5. Brolin (1980:142)

While various design approaches exist on how to successfully relate new buildings to their existing context, addressing issues of building height, materials, massing etc., the author⁶ points out that meeting these criteria does not guarantee the success of the intervention. Rather, the ornament and visual texture of the building, regardless of the style, "often seems a surer way to build a sympathetic visual relationship between buildings".

6. Brolin (1980:37)

7. Expression termed by Adolf Loos (1870-1933), Austrian functionalist architect who rejected ornament and paved the way for the modern movement.

8. Brolin (1980:45)

His appeal to architects and communities is to encourage buildings that are "sympathetically integrated with the old", even if it requires the addition of ornament to achieve a visually harmonious townscape (refer to figure 4.01). This directly contradicts the ideology of the modern movement summarised in the statement: "Ornament is a crime".⁷

9. Brolin (1980:138)

10. Brolin (1980:149)

11. Brolin (1980:143)

12. Brolin (1980:138-9)

13. see Brolin's Appendix B (1980:151-156)

14. Brolin (1980:148)

The author⁸ goes on to criticise architects who propose contrasting new and old, as this approach often allows the designer to ignore any visual compatibility. While this approach may be borne out of a lack of knowledge on how to react to the existing surroundings, it also gives the ar-

chitect the opportunity to flex his ego and exhibit his creativity. Brolin⁹ suggests that the architect's ego is a direct result of the ideologies of the modern movement, which continues to prevail in architectural schools today. In spite of this, the author¹⁰ is aware of the danger of creating monotonous environments and admits that a "delicate balance between variety" can create a "lively and visually interesting contrast".

In essence, it is the superficial "link" to existing contexts that Brolin¹¹ condemns, as it allows designers to justify their approach with a blatant lack of understanding of the value of context. Contrary to the modern paradigm, architectural history forms an important part of communities and the cities they reside in. Furthermore, Brolin recognises the need for "cohesiveness and continuity" in order to respect the "spirit of the place", which can so easily be lost in spite of forming an integral part of the heritage of individual cities.

In this manner, the non-physical link between the architect, the end-user, the existing context and the community gains importance.¹²

The discussion focuses on the evils of modernism and only in the book's appendix¹³ does the author give the reader a better idea of how more visually harmonious environments can be achieved. First and foremost, the author recommends identifying whether or not anything in the surrounding context is worth honouring. This decision goes beyond the architectural quality of the building and includes cultural heritage, historical importance, aesthetic appeal and the degree of visual homogeneity present in the surroundings. The approach, therefore, should reinforce the character of the neighbourhood and regional approaches in order to strive towards achieving visual coherency.¹⁴





Figure 8.01 Goldman Salatsch House (centre), Vienna by Adolf Loos (1911)

Architectural Restoration in Western Europe- Denslagen

In his book *Architectural Restoration in Western Europe: Controversy and continuity*, Denslagen traces the emergence of preservation principles and discusses various approaches with regard to several Western European examples. In post-World War II Europe, preservation¹⁵ focused on physical preservation of individual buildings in response to the vast destruction of historical buildings during the war. With much preservation having been completed, according to Brolin,¹⁶ the focus of preservation today has moved beyond architectural preservation, resulting in the principles of the Charter of Venice being outdated: “[...] monument conservation – which was traditionally mainly concerned with architecture of a high artistic quality – currently, has to be applied to the cultural-historical aspects of ordinary neighbourhoods, residential districts and rural areas”.

Preservation in Europe and the charter of Venice

While nineteenth century architects criticised work of the Baroque period, the modern movement disregarded all historical styles in favour of their own approach. In both cases, the approach led to extensive destruction of the urban environment. For those adhering to the fundamental guidelines of the Modern Movement, which showed little interest in urban design and preservation, architecture is seen as an expression of art and, therefore, legitimises individual expression. Today, architectural criticism continues to be in favour of present day architecture.¹⁷

However, Denslagen¹⁸ criticises this approach, arguing that historic architecture has the right to be protected from the “excessive creativity” that is rooted in modernism. In the course of the discussion, Denslagen points out that when designing in a historical context, designs need to respond to existing historical values. “New buildings have to take their place with fitting politeness in the old environment; they should not be obtrusive or subservient, but rather self-aware and well bred”.

Throughout history, preservation principles have been a product of their time and thus, need to adapt and change as new issues regarding preservation arise. Therefore, preservation “[...] cannot be contained in a single declaration of principles, because – like every codification – this needs to be constantly adapted to changing threats.” Denslagen,¹⁹ therefore, suggests steering away from a declaration of principles, as they are perceived to restrict creativity.

15. The Charter of Venice was drawn up in 1964 by the Second Congress of Architects and Technicians of Historic Monuments; which in 1965 formed the basis of the organisation, International Council on Monuments and Sites (ICOMOS) under UNESCO (Denslagen 1994:236)

16. Denslagen (1994: 237)

17. Denslagen (1994: 246)

18. Denslagen (1994: 254)

19. Denslagen (1994: 263)



Preserving Place

The Power of Place - Hayden

In her book *The Power of Place: Urban landscape as Public History*, Hayden addresses the issue of preservation that goes beyond the physical and architectural preservation of a place. She states:²⁰ "People invest places with social and cultural meaning, and urban landscape history can provide a framework for connecting those meanings into contemporary urban life". Her argument arises due to the debate sparked in the New York Times in 1975 between architectural critic Ada Louise Huxtable and the urban sociologist, Herbert J. Gans regarding the manner in which the preservation of cities is addressed. While the discussion focuses on American cities and American history, many of the issues raised have relevance in the current South African context.

Introduction to the debate

Physical preservation almost exclusively focuses on architectural monuments and neglects the social issues and the greater context of the urban environment. According to Hayden,²¹ these issues are intertwined and cannot be dealt with in isolation and are critical for the future of American (and other) cities. By neglecting to address the related nature of these

“Architecture, as a discipline, has not seriously considered social and political issues, while social history has developed without much consideration of space or design.” Hayden 1995:8

afore-mentioned issues, only an aspect of history is covered, thereby limiting accessibility and the interest of the greater urban community. Social issues tend to focus on individual conflicting issues that arise out of differences of race, gender and class, rather than focusing on a “sense of common membership” that embraces diversity. The debate remains unresolved.

20. Hayden (1995:78)

21. Hayden (1995:9)

22. Hayden (1995:9)

23. Hayden (1995:11)

24. Such as the Apartheid Museum, Johannesburg; The Hector Pieterse Memorial, Soweto; and the District Six Museum, Cape Town

25. Hayden (1995:6)

26. Hayden (1995:19)

The role of Public Space in the urban environment

Hayden²² examines the role of public spaces in the urban environment and the importance of preserving urban history. Referring to public space and urban landscapes as “storehouses” for “social memories”, Hayden heightens the reader’s awareness of personal and collective memories associated with place. In addition, she²³ points out that “identity is intimately tied to memory”, emphasising the fact that preservation needs

Introduction to the South African context

At this point in time in South Africa, the focus of preservation is on the history and heritage associated with the struggle for democracy, which, due to the racially-biased Apartheid Regime, was regarded as unnecessary and thus, completely neglected. This is evident in the recent appearance of numerous memorials and museums²⁴ spanning the country that commemorate momentous events and figures that contributed to the anti-Apartheid struggle. The same is true for the United States of America, with increasing numbers of claims being made for public history and public culture as a result of centuries of neglected ethnic history.²⁵

While this process is completely justified and necessary, the danger lies in the neglect of the country’s pre-Apartheid history. As pointed out by the French sociologist Henri Lefebvre, the “production of space” is inevitably a reflection of the economic and social situation of a culture at a specific point in time.²⁶ By neglecting to recognise the physical and cultural manifestations of pre-Apartheid South Africa, one neglects to understand the past and how it contributed to the emergence of Apartheid. This contributes to perpetuating prejudices rather than embracing diversity as the past inevitably lives on in the present. The result is the erosion of the character of individual places, which comprises multiple memories, layers of meaning from various generations, aesthetic quality and the natural environment.

to go beyond the preservation of architectural monuments. While not against the preservation of architectural form itself, as this process does “assert its visual presence in the spaces of the city”,²⁷ Hayden criticises the lack of preservation of ordinary neighbourhoods and the collective identity associated with public history embodied in public space.

Processes that weaken the “power of place”

Architectural Preservation

Hayden²⁸ defines the “power of place” as: “the power of ordinary landscapes to nurture citizens’ public memory, to encompass shared time in the form of shared territory”. In most instances, architectural preservation is the adaptive reuse of a building, which tends to further restrict public access. While preserving community-based public history is often considered not worthy of municipal spending, architectural preservation tends to be more costly. Expensive restorative works freeze buildings in time leaving them “lifeless”.

Urban Renewal

Hayden²⁹ points out a further factor that negatively impacts on the urban environment is the process of urban renewal. This process is limited to the physical and environmental regeneration of an area, often resulting in the neglect of the intangible that is integral to capturing the power of place. The result is a decrease in understanding of cities, their history and culture, and the inherent sense of place.

New buildings

Although the focus of Hayden’s discussion is on the preservation of architecture,³⁰ the same is true for the erection of new buildings that may totally ignore or destroy the sense of place inherent in a space. This is often the result of a lack of understanding of the cultural and social dynamics of an area.

Proposals to preserving the power of place

Understanding the context

Hayden³¹ proposes, therefore, that the role of urban landscape history, integral to any renewal process, is to reclaim the identities of deteriorating neighbourhoods. As a result, a better understanding of the “complex forces that have led to present configurations” can form the basis for further decision-making. Hayden points out that inhabitants themselves must understand the reasons for the decay of their neighbourhood in order for a sense of responsibility to allow for positive change.

Interdisciplinary work

Success is determined by interdisciplinary work. The collective input of public history, architectural preservation, environmental protection, public art and the relevant community establishes the context of social memory and contributes to a greater understanding of the range of the issues at hand. While this approach requires a less controlled process and includes less predictable participants (which inevitably leads to conflict at some stage), it forges a relationship between history and the people it is representing.³²

The benefits of greater participation

“Social relationships are intertwined with spatial perception”.³³ By involving more people in the process of preserving urban history and social memory, social diversity is given recognition, resulting in a heightened sense of place.³⁴ Therefore, community-based public history empowers communities to define their collective past. In this way, the process of preserving urban landscape history is meaningful for the relevant communities. According to Hayden,³⁵ this collective identity comprised of social history and architectural preservation not only contributes to the potential economic development of the city, but also helps communities to face difficulties due to an awareness of past accomplishments.³⁶

27. Hayden (1995:53)

28. Hayden (1995:9)

29. Hayden (1995:9)

30. Hayden (1995:9)

31. Hayden (1995:42)

32. Hayden (1995:76)

33. Hayden (1995:16)

34. Hayden (1995:13)

35. Hayden (1995:61)

36. Hayden (1995:62)

Urban Regeneration

Urban Regeneration: A Handbook - Roberts

In his book *Urban Regeneration: A Handbook*, Roberts addresses the issue of urban regeneration and identifies current trends that are common in successful regeneration projects. The book is only an introduction to urban regeneration theory and practice; nevertheless it discusses each issue with numerous examples and case studies. All discussed examples are based in Europe, mainly in the United Kingdom.

According to Roberts³⁷ the principles of urban regeneration are based on a thorough analysis and understanding of the context. This forms the basis for an integrated strategy that relies on the initial analysis of an area. A sustainable regeneration approach simultaneously addresses the physical fabric, social structures, economic base and environmental condition of an area. As urban areas are “complex and dynamic systems”,³⁸ the processes require the maximum possible flexibility and participation of all stakeholders in the decision-making process in addition to the understanding that parts of the process will inevitably progress at different rates.

The issue of Policy development

Roberts³⁹ specifically addresses the issue of policy-making as urban regeneration is often hindered by the inability of regulations and policies to adapt to a particular situation. Roberts does not go into detail as to how policies need to adapt, but he briefly discusses the main areas in which policy development is important:

- Future development of regeneration strategy
- Economic and financial issues
- Physical and environmental regeneration
- Social and community issues
- Policy and practice

37. Roberts (2005:18-19)

38. Roberts (2005: 9)

39. Roberts (2005:7)

40. Roberts (2005:9)

41. Hobbs 2007: personal interview

42. Roberts (2005:22)

It is evident that the process of urban regeneration⁴⁰ is deeply rooted in societies’ structure and must closely reflect “the opportunities and challenges which are presented by urban degeneration in a particular place at a specific moment in time”.

A regenerative approach

Thus, the objective of this dissertation is to firstly, change the perception of the site “even if it’s only for 30 seconds”.⁴¹ Secondly, the intervention is required to go beyond a mere physical change of the site. Inserting an architectural icon into the environment or restoring the synagogue would only superficially address the issue of regeneration in the area. As Roberts⁴² points out, changing the physical appearance of the site is only part of the process. Industrial restructuring (in order to maximise returns), working within the constraints of available land and existing buildings while accommodating the social composition of urban areas is vitally important to ensure a mutually supportive environment.

Finally, while this dissertation aims to support and motivate the proposed building on the site, it is hoped that it may encourage decision-makers to take an integrated regeneration approach when developing a strategy for the area.

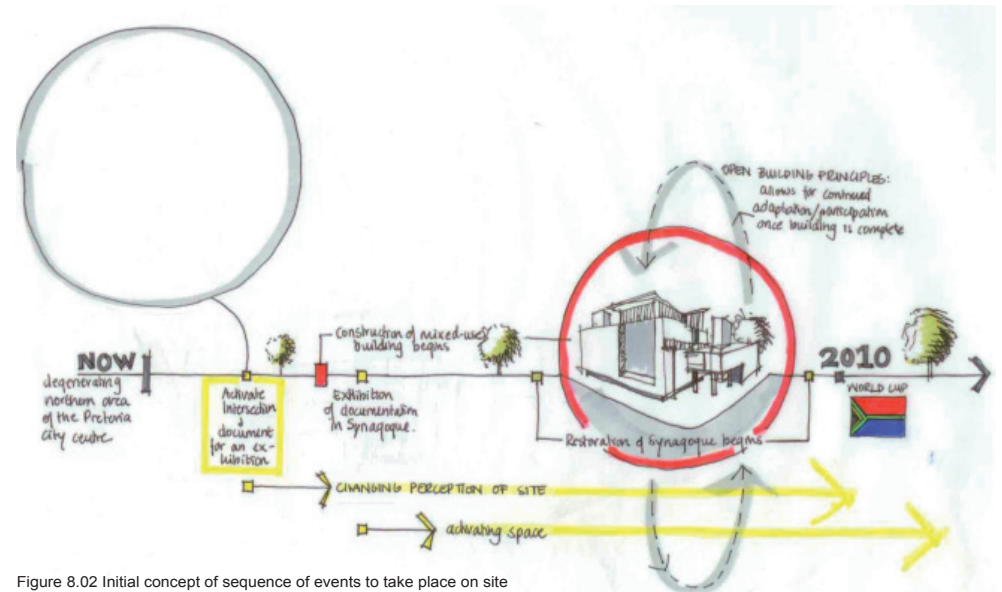


Figure 8.02 Initial concept of sequence of events to take place on site

“Comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change.” Roberts 2005: 17

Precedents

The following local examples address an issues that has been identified in previously discussed literature. Each precedent is relevant in its approach to a precific scenario.

Participation

The District Six Museum - Cape Town

One local example of a successful participative project is the District Six Museum, located in the Cape Town CBD. The objective of the District Six Foundation,⁴³ formed in 1989, is to keep alive the memories of District Six and the people affected by forced removals under the Apartheid Regime. Only in 1994, after an extensive period of “memory work”,⁴⁴ was the museum launched. Situated in an old church on Buitenkant Street,⁴⁵ the museum continues to act as a centre allowing “former residents of District Six and others to recover, explore and critically engage with the memories and understandings of their District Six and Apartheid pasts”. In addition, the museum forms the foundation for current plans for the reconstruction and design of District Six.

The Museum

The central attraction of the District Six Museum is a large hand-drawn map of District Six. The map documents comments, names and memories of former residents. Employees at the museum are former residents of District Six, and they bring part of the place’s history to life by sharing personal experiences with the museum’s visitors. This approach to preserving urban landscape history⁴⁶ is not only socially inclusive, but becomes the basis for public history, urban preservation and the redevelopment of the area, which Hayden⁴⁷ sees as being important for determining the success of the process. Furthermore, unlike many museums that capture only a glimpse in time and history, the museum continues to document visitor’s reactions through the incorporation of these into the growing exhibition. In this way, the museum becomes meaningful not only for those that were directly affected by the destruction of District Six, but also for future generations and those removed from the events at the time.

The challenge of conserving the memories of District Six By means of a Heritage Impact Assessment (HIA), a Conservation Management Plan (CMP) has been put in place to conserve what remains of District Six. The CMP⁴⁸ successfully recognised that “individuals and communities are shaped by places as well their relationships and interaction within the spaces, and with each other”. While the difficulty continues to lie in the conservation of the intangible due to the destruction of the entire area, the museum successfully portrays the past by means of a

43. The District Six Foundation 13-07-2007: <http://www.districtsix.co.za/frames.htm>

44. Le Grange (2007:59)

45. Buitenkant Street lies parallel to Long Street

46. refer to p38

47. Hayden (1995:12)

48. The District Six Foundation 13-07-2007: <http://www.districtsix.co.za/heritage.html>

49. Le Grange (2007:59)

Historical background to District Six

District Six was declared a “white Group Area” on 11 February 1966, resulting in the relocation of 60 000 people to the Cape Flats over the following 15 years. By 1984, the destruction of the once vibrant neighbourhood was complete, with only the churches and mosques remaining. Today, these community facilities, that continued to operate as an act of defiance during the Apartheid years, form the focal points of public space and activity for the envisaged redevelopment of the area.⁴⁹



Figure 8.03 Flashpoint Development Phasing Strategy for District Six



Figure 8.04 Panoramic View of District Six and remaining church

continually growing backward-looking present. The memory of the place “has been conserved in the minds and actions of the former community that inhabited it”.⁵⁰ “Memory work” therefore began with a series of public art interventions on the site, aimed at bringing to the fore memories and associations, in order to conserve and document the intangible. In this way, the physical and the intangible were kept on a par, contributing to a successful preservation of the spirit of the place.

50. Le Grange (2007:59)



Figure 8.05 Children gathered around central map in the District Six Museum

Changing perception with public art

The Eland - Braamfontein

One approach⁵¹ to urban preservation and regeneration is by means of introducing public art, as it can help claim public space, engage citizens and stimulate interaction, conversation and open comment on social issues. In the past, public art was accessible to the public only because of its public location, usually in public parks. Nineteenth century public art was limited to sculptures of figures, usually of white men commemorating their respective conquests. The history and memories of other diverse groups and women were automatically neglected.⁵²

Today, public art is more resonant for individuals. The art critic and author of *Mixed Blessings*, Lucy Lippard⁵³ describes contemporary public art as:

“Public art is accessible art of any kind that cares about/challenges/involves and consults the audience for or with whom it is made, respecting community and environment; the other stuff is still private art, no matter how big or exposed or intrusive or hyped it may be”.

51. Hayden (1995:68)

52. Hayden (1995:67)

As with other preservation approaches,⁵⁴ “no public art can succeed in enhancing the social meaning of place without a solid base of historical research and community support”.

The Trinity Session

The Trinity Session is a contemporary art production team that operates from The Gallery Premises at the Civic Theatre in Johannesburg. Directors, Steven Hobbs and Marcus Neustaetter are interested in different aspects of contemporary public art. While Neustaetter’s niche is electronic art, Hobbs’⁵⁵ focus is on the urban environment and the engaging role art plays in the urban environment. He supports Hayden’s argument with his approach to urban regeneration by introducing public art and by working in conjunction with a variety of consultants, professionals and communities.⁵⁶ “It requires the analysis, investigation and activation of a team of people to be truly successful”.

“Eaton listed the features which should be incorporated into the fabric of the city centre, ‘not as extravagances, but as necessitates’: trees, ‘with which shops and electrical communications would have to learn to live in submission, and not as masters’; off-pavement bays containing gardens, fountains and works of art; pedestrian arcades and malls away from the noise and fumes of the traffic; and an art gallery ‘in itself a work of art of the highest order’, a theatre and a concert hall, situated in open park-like settings.” (Harrop Allin 1975:53)

53. Lippard (1990:12)

54. Hayden (1995:75)

55. Co-partner of the Trinity Session, that operates from the The Gallery Premises at the Johannesburg Civic Theatre. They have been involved in several JDA commissioned projects.

56. Hobbs 2007: personal interview



Figure 8.06



Figure 8.07



Figure 8.08



The Trinity Session has been extensively involved with the Johannesburg Development Agency (JDA) in establishing the cultural circle in Johannesburg, as well as in the commissioning of public art for the city of Johannesburg. The most recent piece of public art⁵⁷ is a large 4m high concrete Eland located at the gateway entrance into Braamfontein. According to the artist, Clive van den Berg,⁵⁸ the work “prompts reflection on our relationship to the past, and to the interconnectedness of environmental, cultural and spiritual destinies. [...] what I am concerned with here is the geography of memory and spirit”.

Architecture as a form of public art

Architecture is a form of art that embodies functional and spatial qualities. Located in the public realm, architecture can potentially function as a form of public art. In the same way as public art is used to change the perception of a place as a means to urban regeneration, architecture can potentially achieve the same – and more.

57. The Eland was erected on the eve of 18 August 2007

58. Ngedweni Design and The Trinity Session (2007:18)



Figure 8.09 Johannesburg's latest piece of public art, cnr Jan Smuts and Amershoff Road

Activation

Cascoland Event - Johannesburg

Cascoland⁵⁹ was initiated at the 2004 Oerolfestival on the island of Terschelling in the Netherlands. Together, five artists researching 'Do it yourself' (DIY) architecture erected a village that kept developing during the course of the festival through audience participation. Through interaction with a South African theatre maker, the plan emerged to bring Cascoland to South Africa.

The first Cascoland Event in South Africa

The first Cascoland event, New Crossroads⁶⁰ took place in 2006 in Cape Town in the form of a mobile village with the focus of transforming a public space into an "accessible and liveable one". The approach remained DIY, and engaged and inspired local residents. The result was "an explosion of public cultural life and a reported reduction in crime, visitors of all kinds walking through a community otherwise usually isolated".



Figure 8.10 Children fascinated by opening in the ground



Figure 8.11 Camping in the city during the event

“Cascoland is a research and art project that involves international artists, architects, designers, performers and communities. Cascoland initiates projects in public space to create an awareness of urban issues in a positive manner to mobilise local residents, artists and initiatives to participate in this process. Public space is temporarily activated by interventions, the construction of architectural objects, research into the use of public space and audience performances.”

Cascoland 01-04-2007: <http://www.cascoland.com/info/missionst.html>

Cascoland in Jo'burg in 2007

In March 2007, the second Cascoland event took place at the Drill Hall in Johannesburg, located on the corner of Plein and Twist streets. The diverse team worked hand-in-hand with local caterers, performers, labourers and artists to make the event possible. The objective⁶¹ of the event was to allow public art to act as a tool for activating and developing public space. "As important as producing a physical work of art is, the creation of awareness and inciting a change in perception of public space with the audience".



Figure 8.12 Late afternoon performance

59. Cascoland 01-04-2007: <http://www.cascoland.com/info/missionst.html>

60. Cascoland 01-04-2007: <http://www.cascoland.com/info/missionst.html>

61. Cascoland 01-04-2007: <http://www.cascoland.com/info/missionst.html>



Figure 8.13 Sketch of the Drill Hall



Figure 8.14 The Drill Hall today

Activities at the event

Activities included the construction of street furniture and swings made out of old tyres, the erection of a temporary scaffolding tower that announced the day's activities and hosted music events, a sketch-a-thon, the provision of tented accommodation on the roof of Drill Hall, and performances that forced taxis to take note of pedestrians, amongst many other activities. All events and activities that took place at the event were intended to challenge the public's perception of the site and the mundane routines that dominate people's lives.

Urban Renewal is not enough

In spite of having recently been through an urban renewal process,⁶² Drill Hall remained a 'un-activated' public space. The event, therefore, not only brought people that would not usually be in that part of the city into the space, but also allowed the local residents to participate and to use this public space. Both adults and children were catered for at the event, and street furniture and swings made during the festival remain on the site for use by the public.

Success of Cascoland 2007

At this stage, it is not possible to determine the success of the event, but it can be assumed that the lasting nature of the intervention at least changed the people that attended the event's perception of the public space. Events such as this point out the importance activating a space and critically engaging the public.

62. Urban renewal by Michael Hart Architects and Urban Designers (Deckler et al 2006:27)

Process

The Sans Souci - Kiptown

The Sans Souci, located in Kiptown is today a ruin after it burned down in 1995. During the Apartheid years it was active being one of the few places where black people could gather for movies, performances and low-key political gatherings. Today Lindsay Bremner and 26' 10 South Architects are in the process of redeveloping it as a community-based heritage project.⁶³

The long term vision⁶⁴ for the Sans Souci is a vibrant centre while the reconstruction process is incremental. The process begins with a series of events rather than a building. By hosting movie evenings and other dance performances in conjunction with the Gauteng Film Department, the community are encouraged to attend and support the initiative. Over time, the cinema is rebuilt, firmly capturing the memory of the place and establishing it for future use.

The adopted process allows the project to establish itself in the community over an extended period of time, ensuring its use once the project has been completed. Activity on site takes preference over the physical form - emphasising the importance of the community.

63. Deckler et al (2006:51)

64. Deckler et al (2006:53)



Figure 8.15 The Sans Souci ruin



Figure 8.16 Film night at the site



Figure 8.17 The outdoor cinema

Design Influences

The following chapter deals with precedents that have influenced and informed the design process as well as the proposed building.

Local Design Precedents

The Faculty of Law - UP Campus, Pretoria

The new Faculty of Law Building by StudioKrugerRoos Architects Urban Architecture Design is situated on the main campus of the University of Pretoria and was completed in 2005. The building is located on a major north-south pedestrian axis in the north-eastern corner of the main university campus. Required to embody the “principles of transparency and gravitas”,¹ it accommodates a large library, lecture and study facilities as well as the staff of the Faculty of Law at the university.

The building sits strategically on the university’s grounds focusing on the surrounding campus space.² The glazed entrance foyer has a courtyard on either side of it which acts as a gathering space located directly on a major north-south axis of the campus. The visual transparency is further emphasised by the tower of one of the ladies’ residences, situated just north of the building.

The bulk of the building runs in an east-west orientation which is emphasised by the circulation routes running parallel to the building right the way through. At the eastern end of the axis, the building frames the view of a two-storey house. Moving along the circulation bridges, the user subtly passes through enclosed and open spaces without being aware of the transition from indoor to outdoor spaces. Vertical circulation and lifts are located adjacent to the axis and are accessed via bridges. These protrude into communal outdoor courtyards.

In the main Oliver Tambo Library, adjacent to the central covered walkway, the library material and study area is located on a large ‘bridge’ that is separate from the skin of the building. Circulation routes step out into the multi-storey atriums. This allows for the transition from a more intimate space to an experience of the whole library. The interior has ample northern light, while the glazed southern façade exposes the campus grounds and a panoramic view of the mountain range south of the city.

Influence

1. Deckler et al (2006:105) The transparency and ‘openness’ allows the user to experience the time of day, seasonal changes as well as the transition between indoor and outdoor spaces. This is emphasised by the deciduous trees planted in
2. Le Roux & Botes (2005:37)

the indoor-outdoor courtyards. The natural light ensures a pleasant atmosphere which is mutually enjoyed by staff and students.



Figure 9.01 Southern entrance to the Faculty of Law



Figure 9.02 Vertical Circulation



Figure 9.03 East-west orientation circulation routes

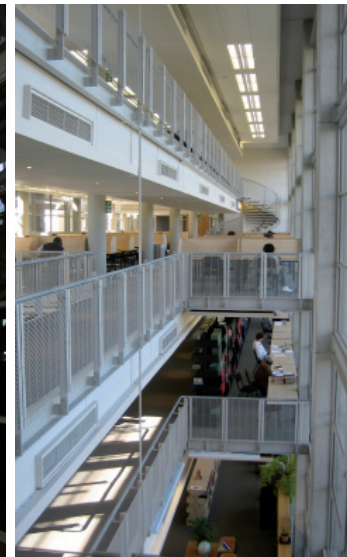


Figure 9.04 Main Library & Atrium

The Hector Pieterse Memorial - Soweto

The Hector Pieterse Museum, designed by Mashebane Rose Architects, is located 600 m away from where the original shooting of Hector Pieterse took place on 16 June 1976. On that day, the students of Soweto took to the streets in protest against the Bantu Education policies and the fact that the official and compulsory language of education was Afrikaans. Hector Pieterse, a 12-year-old boy, was the first of hundreds of students to be killed by the police during the protest. Today, this event is commemorated on Youth Day.³

Design approach

According to Deckler⁴ the building is designed from the inside out and tells of the tragic events that took place on this day. The build-up is emphasised by the continual ramp that rises around a central courtyard as the visitor to the museum progresses through the space. The central courtyard symbolically represents a graveyard in memory of those children that died ruthlessly at the hands of the authorities, and acts as a constant reminder of the horrific events that took place. Openings punched into the shell of the building relate to specific places and form part of the exhibition. Elements in the landscape contribute to contextualising the museum experience as they draw the eye to strategic points in the surroundings. The foreign shape of the building as perceived from the exterior is a direct reflection of the interior progression.

The red brick exterior of the Hector Pieterse Museum echoes the surrounding houses remaining from the 1950s on the square.

Influence

The museum-experience extends beyond the physical boundaries of the building and allows the surrounding urban landscape to echo the exhibition within the museum. The focus of the museum is on the past events that took place in the vicinity. The building is securely anchored in its context and forms a means of contextually communicating the history of the area.

3. Deckler et al (2006:31-33)

4. Deckler et al (2006:33)



Figure 9.05 Strategic window



Figure 9.06 Exterior view of museum



Figure 9.07 Entrance to museum



Figure 9.08 Openings as part of the exhibiton



Figure 9.09 Elements in the urban landscape

International Design Precedents

Exhibition-Assembly Building - Ulm, Germany

The Exhibition and Assembly Building (*Stadthaus*) on the *Münsterplatz* in Ulm in Germany was built from 1986 to 1993. Situated on this historically contested square⁶ the building houses a large public assembly hall, exhibition spaces and a tourist information centre.⁶

On an urban level the *Stadthaus* responds directly to the Ulm Münster Cathedral, which boasts the highest church spire in the world.⁷ While the building forms a space which is “secular response to the sacred space of the Cathedral”, it also reduces the scale to that of the pedestrian, defining recreational spaces.⁸ “The design of the Square aims for a spatially consolidated space composed of different, yet coherent, individual areas”.⁹

5. Bächer (1995:21)
 6. Jodidio (1995:131)
 7. Bächer (1995:21)
 8. The *Stadthaus* at Ulm and the Cathedral Square (1995:11)
 9. The *Stadthaus* at Ulm and the Cathedral Square (1995:11)
 10. Bächer (1995:21)
 11. The *Stadthaus* at Ulm and the Cathedral Square (1995:10)
 12. Bächer (1995:21)
- A series of diagrams indicate how the grid of the cathedral and the responding urban forms shaped the buildings footprint and informed its position. Carefully placed opening frame surrounding views and allow for “multi-layered [...] interpenetration.”¹⁰ It is from the main exhibition room that one has the dramatic view of the cathedral tower.¹¹
- The stark whiteness of the building echos the ‘spirit of classical modernism’.¹² Yet the form of the building, generated by its surroundings clearly demonstrates the careful consideration and appreciation of its context. Continuity and the enriching of the public space are achieved without any additional ornament but rather by means of subtle spatial qualities.

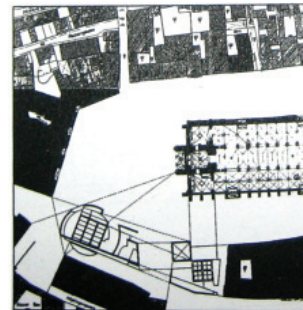
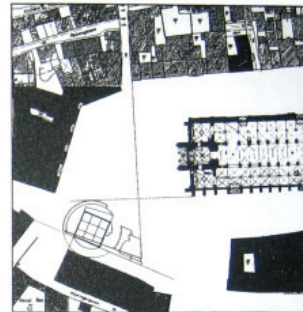
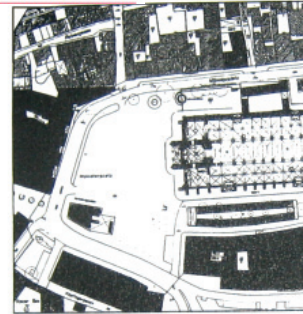


Figure 9.10 Analysis of placement



Figure 9.11 'Perspective View of Cathedral Square' (Academy Edition 1990:145)

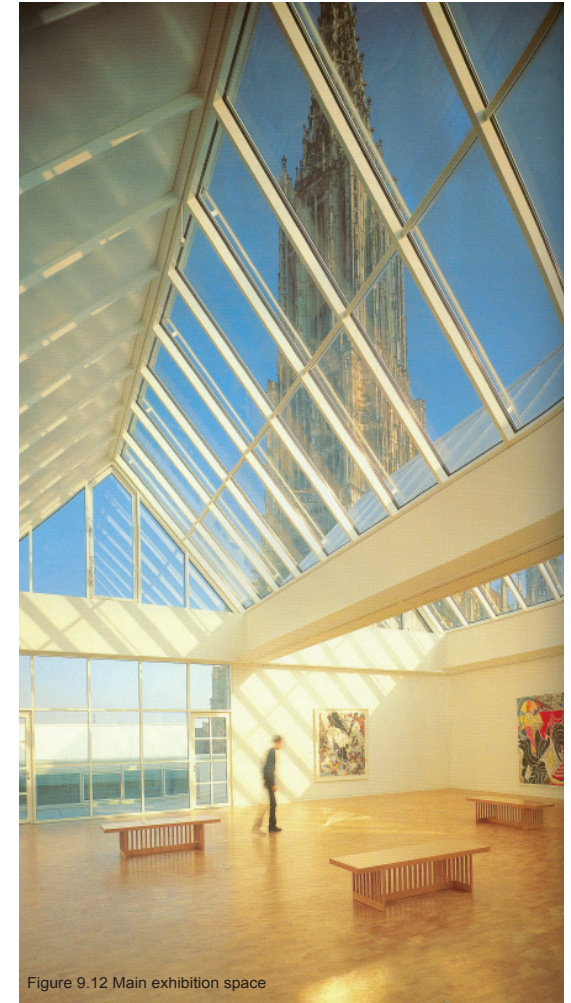


Figure 9.12 Main exhibition space

Design Development

Surrounded by valuable heritage buildings, the objective of the design proposal is to allow the city inhabitants, as well as visitors to the city, to experience the historical value of the surrounding context. Thus, the surrounding context determines the proposed building's boundaries, its orientation and its footprint. In an attempt to create a greater appreciation for our local heritage, this project creates the opportunity for a richer experience of our historic built environment.

The following chapter explores the design process and the various design generators.

Initial Block Model Development

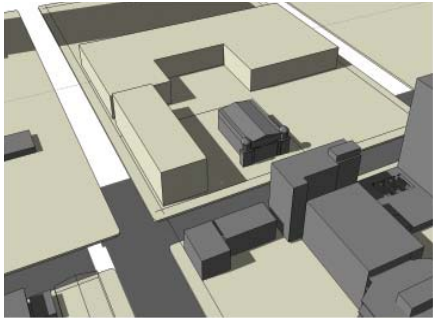


Figure 10.01

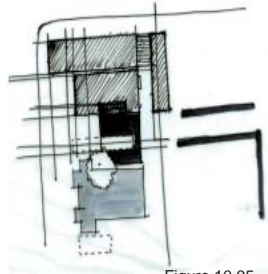


Figure 10.05

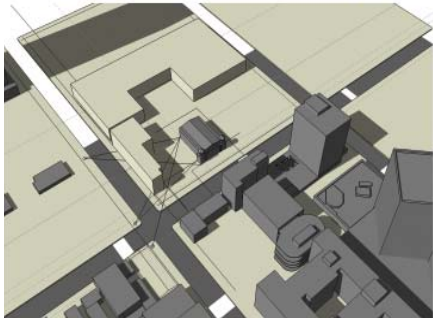


Figure 10.02

Figure 10.01- 10.04
Initial block model (March 2007) exploration to determine building height and form in relation to the Old Synagogue and other surrounding buildings

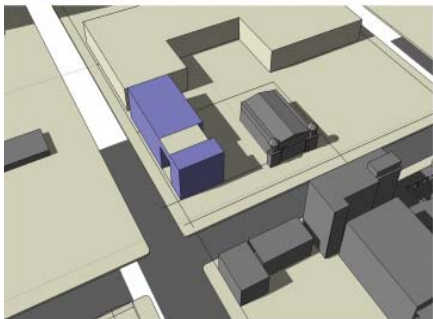


Figure 10.03

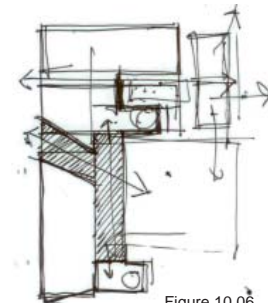


Figure 10.06

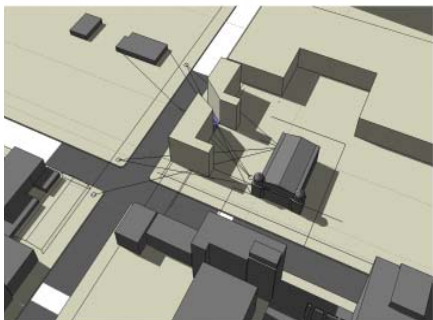


Figure 10.04

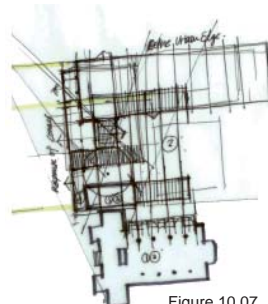


Figure 10.07

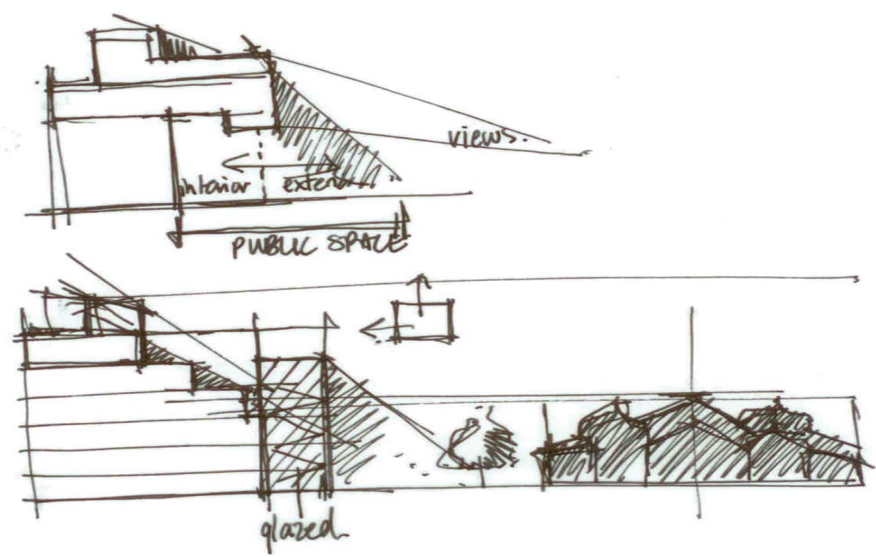


Figure 10.08 Determining a height for the proposed building

The initial block model was used to determine an appropriate position and size of the proposed building on the selected site. The primary objective was to allow for the user to experience the surrounding historical context by means of strategically placed openings in the building. In the same way this process helped determine where the scale of the building needed to be reduced to respond to the height of the Old Synagogue.

The process was one of carving away at an initial block to determine the above mentioned parameters. In addition, this method helped establish the sun pattern on the southern courtyard and determine a height for the building which was not to shade the synagogue at any point of the day.

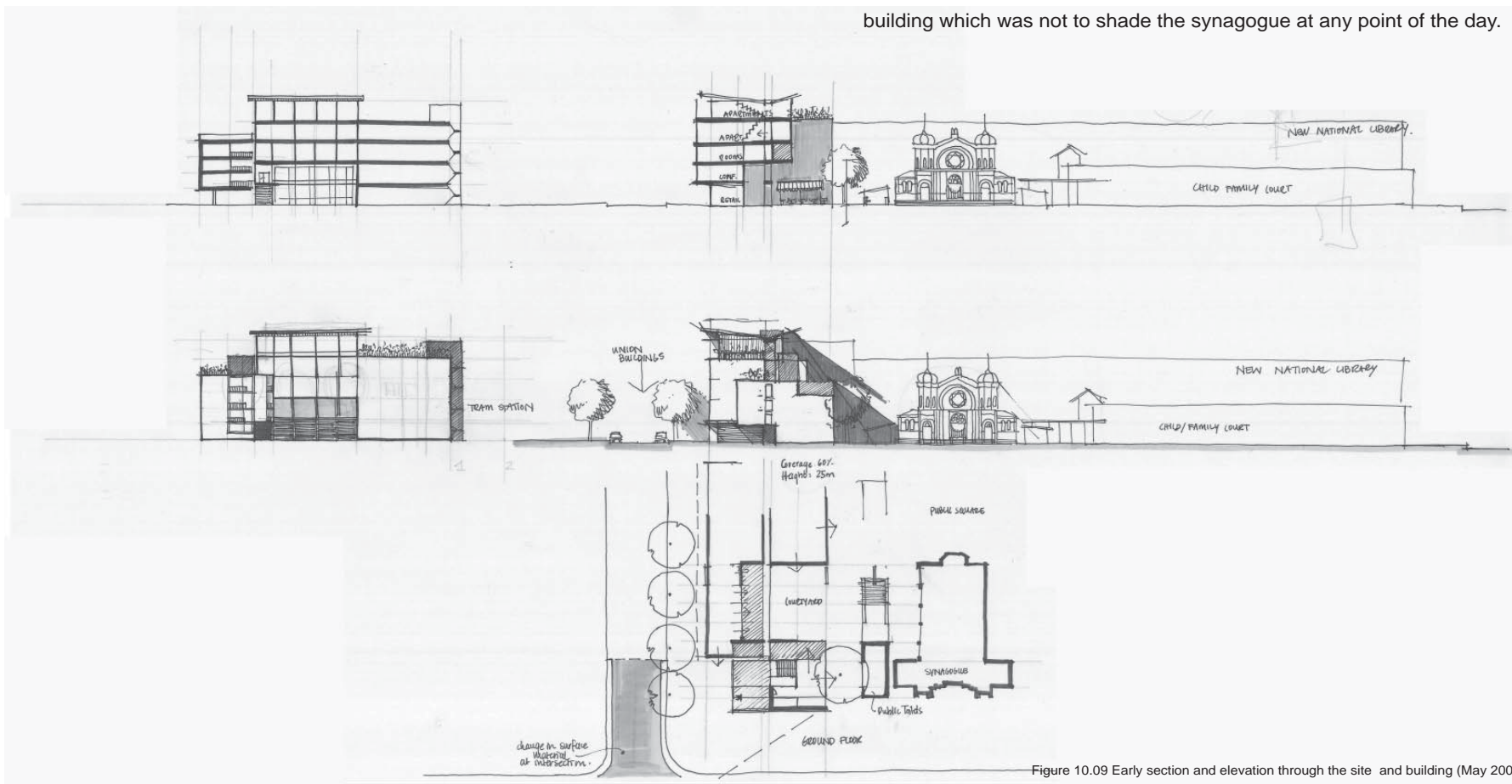


Figure 10.09 Early section and elevation through the site and building (May 2007)

Design Generators

Design generator one: The minister's house

The minister's house,¹ originally located on the selected site, faced south. The building was orientated toward the Synagogue with its stoep on the southern side and the serviced areas on the northern side of the building. The disregard of climatic orientation suggests the significance of the synagogue at the time. The proposed building is similarly orientated and partially encloses the public space, which forms the connection between old and new.

Design generator two: Other existing buildings

Jansen House, situated on the northern edge of Struben Street, determines the eastern border of the proposed building in order to allow for a visual link from the proposed public space situated directly behind the synagogue through to Jansen House. The Panagos Building, situated on the south-western corner of the intersection, determined the position of the atrium as well as the circulation spine located within the building. The position of the main facade of the synagogue determined the position of entrances and movement routes through the building. The initial shape of the building was, therefore, determined by a process of carving away at an initial block of solid mass.

Design generator three: The Old Synagogue

The 3,8m structural grid of the synagogue generated the grid of the proposed building, which runs in a north-south direction. This rhythm is to be emphasised by paving materials and patterns at a later stage in the process.

Design Generator four: Natural light as a generator

In addition to responding to the existing built environment, the building height was determined by the shadow the building will cast on its surroundings. Therefore, the height of the building and the pitch of the roof were determined by their impact on the surrounding spaces and buildings, and were designed in such a way as to not cast a shadow on the Old Synagogue at any point in time during the day. The impact of natural and additional electrical lighting is dealt with in greater detail in the technical investigation.

1. refer to p34 for more information on the minister's house

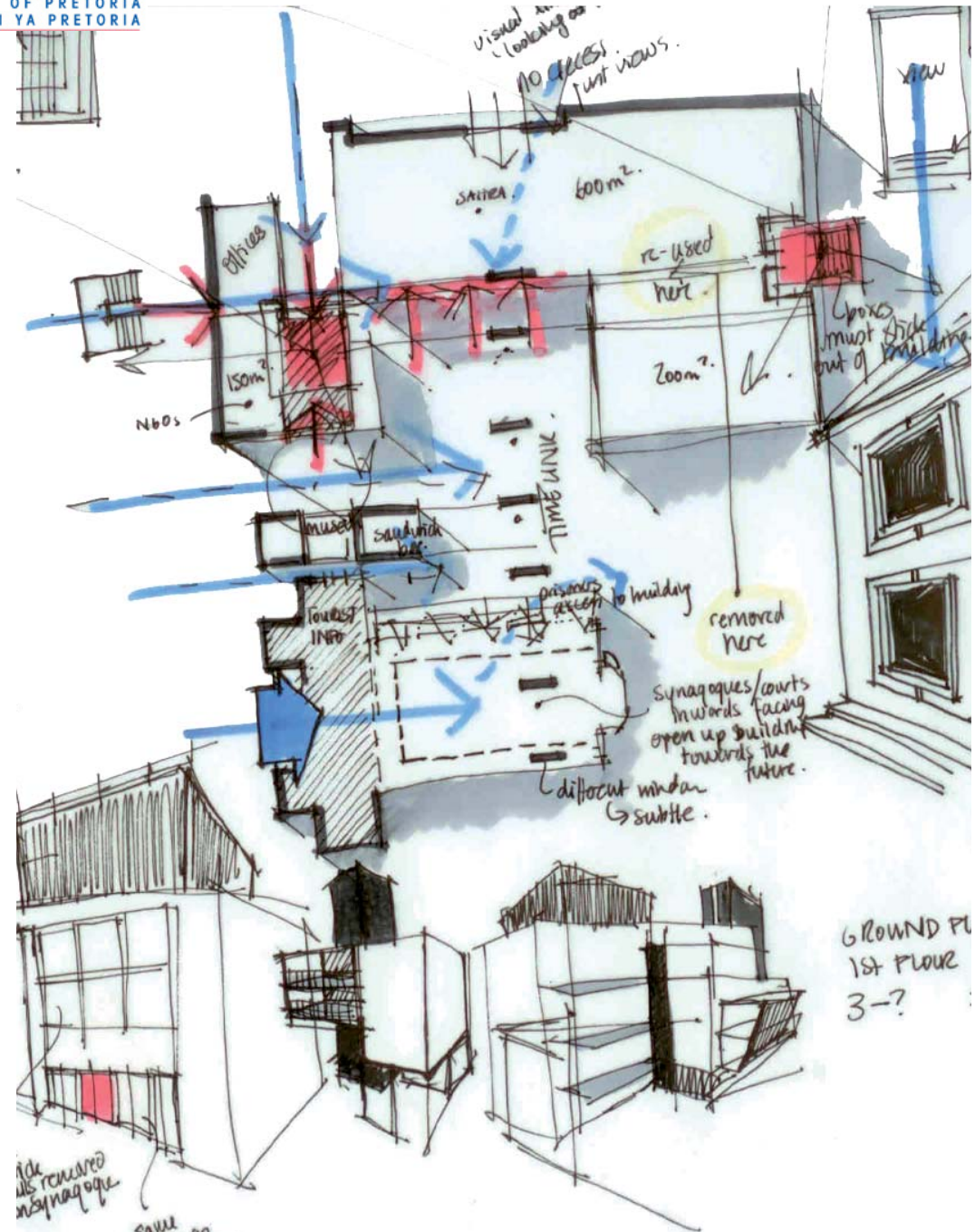


Figure 10.10 Initial concept sketch indicating access point and orientation (March 2007)

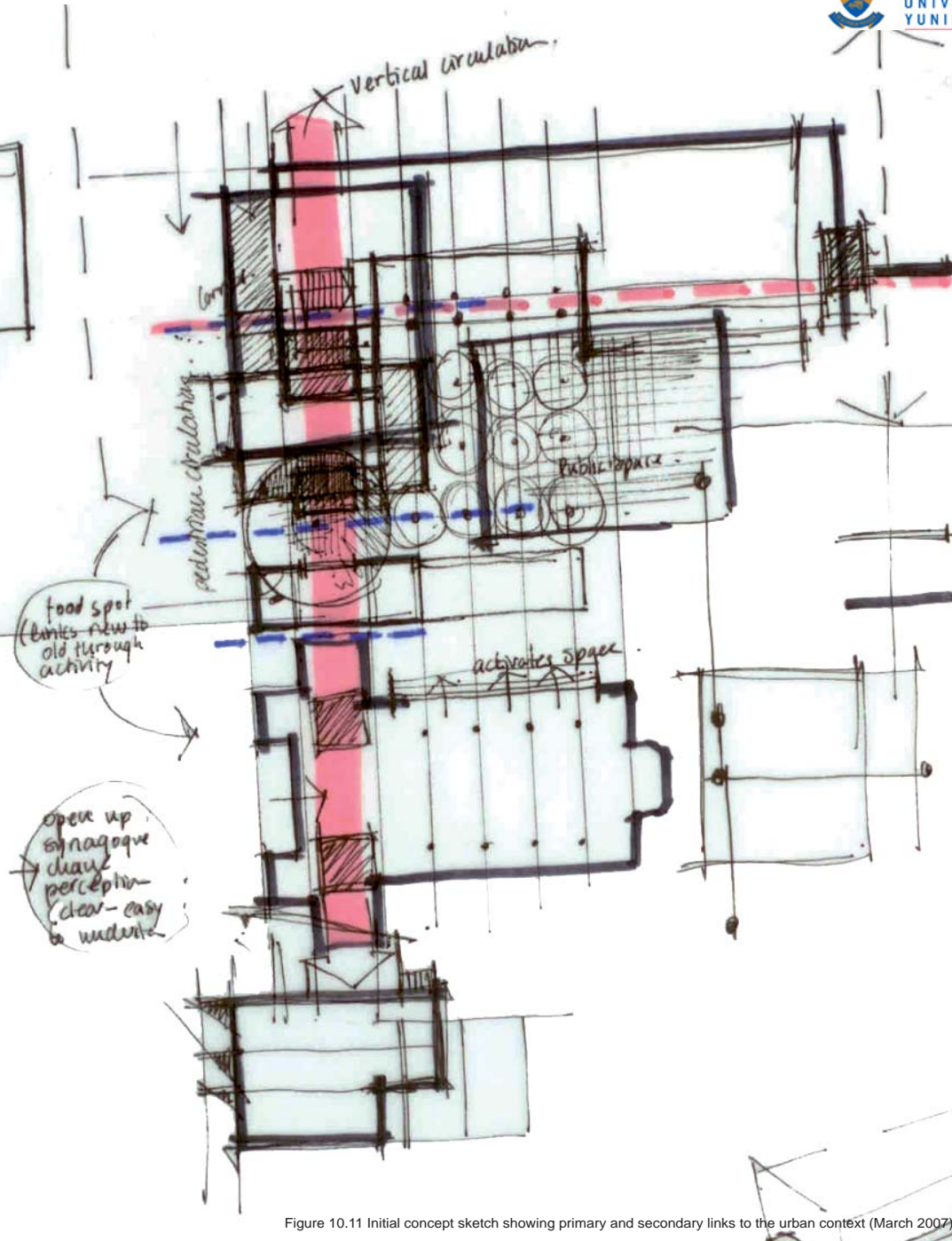
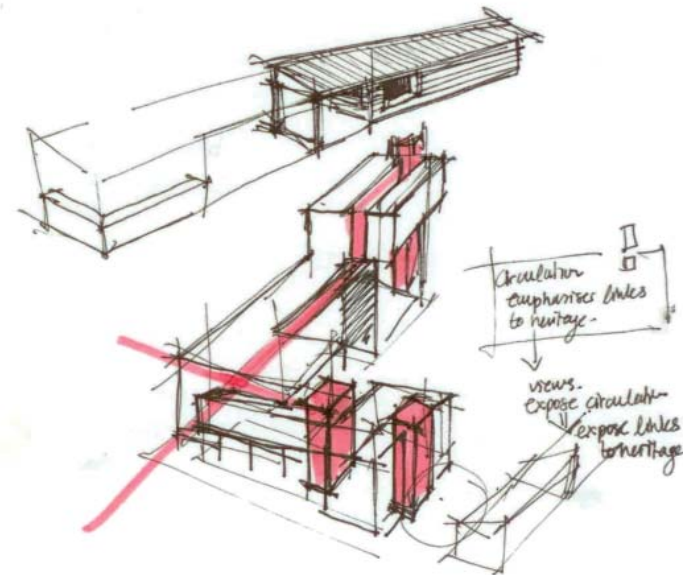


Figure 10.11 Initial concept sketch showing primary and secondary links to the urban context (March 2007)



circulation = rigid movement = active
 ⇒ contradiction

circulation ⇒ movement = activation of space

Figure 10.12 3D sketch of primary link to historical context (March 2007)



Concept Model Development

Concept Model ONE

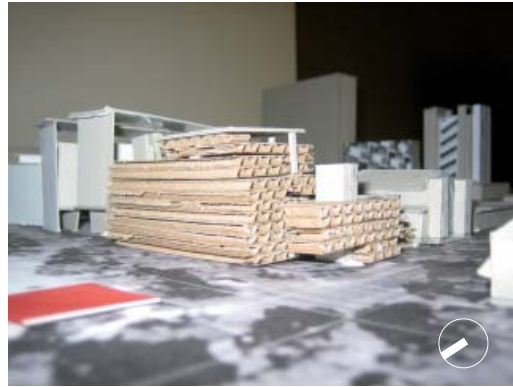


Figure 10.13



Figure 10.14

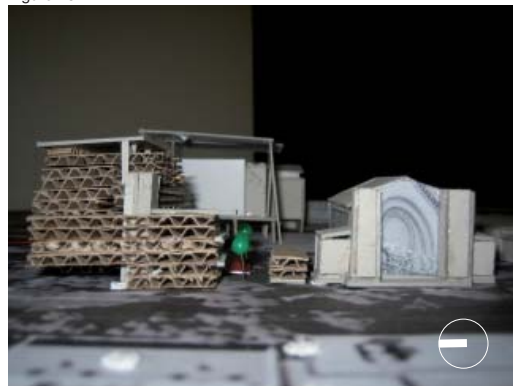


Figure 10.15



Figure 10.16



Figure 10.17

This first model was built intuitively at a scale 1:500. It responds to the surrounding historical buildings with a decrease in scale as the building approaches the Old Synagogue and the double-storey Panagos Building. In response to the group framework, the Jansen House and the proposed public space surrounding it determine the eastern boundary of the site. The building faces both Paul Kruger and Struben Streets in an attempt to define the urban edge and emphasise the vista towards to Union Buildings and Church Square.

The building maximises northern light in order to benefit from seasonal changes. Similarly, the building steps back not only to define a public courtyard but also to allow sunlight to enter this public space on the southern side of the building.

The additional admin building (dating from the 1950s) north of the synagogue is partially removed.

Circulation towers are located on the two major pedestrian movement routes around the building: The first is aligning with the tower of the synagogue and the second is located on the eastern facade of the building, in line with the pedestrian access route to the Jansen House. In keeping with the group's framework, the objective is to accommodate pedestrian movement as freely as possible.

The luxury apartment on the top floor of the building allude to the position of the Synagogue south of the building.

Concept Model Criticism

- The conceptual approach is not clear
- Response to surrounding context is not strong enough

Sketches

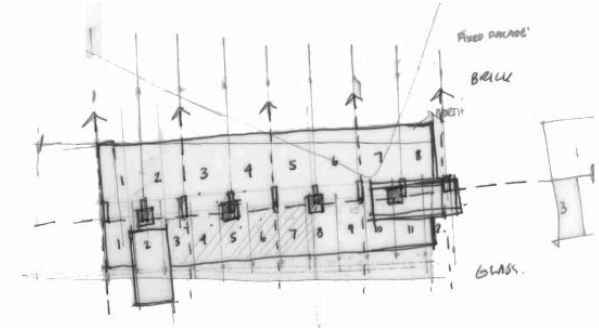


Figure 10.18

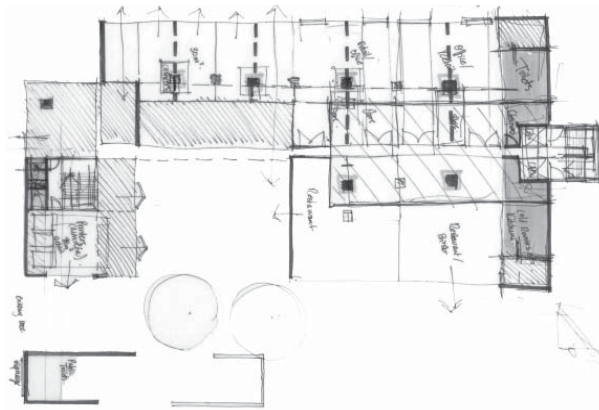


Figure 10.19

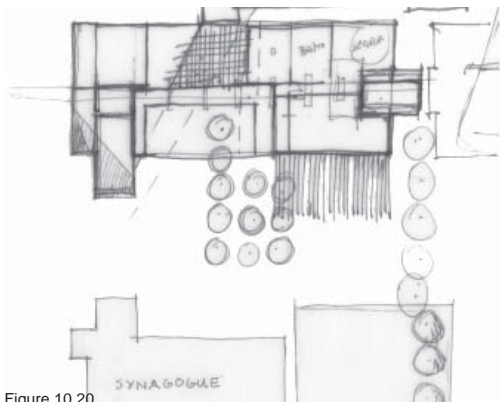


Figure 10.20

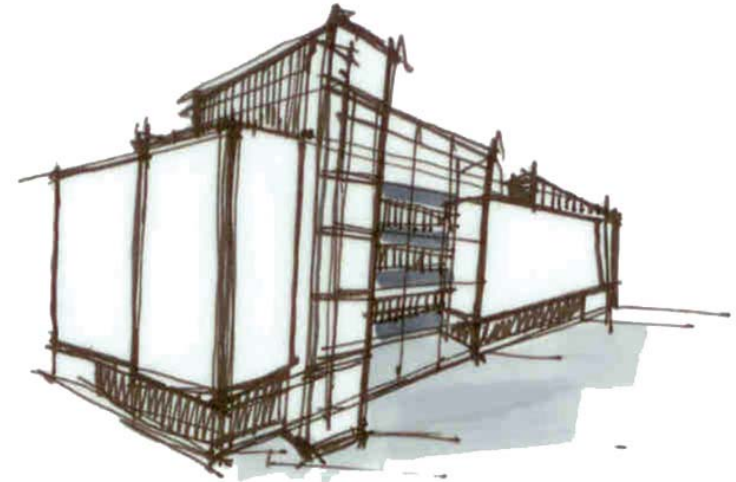


Figure 10.21

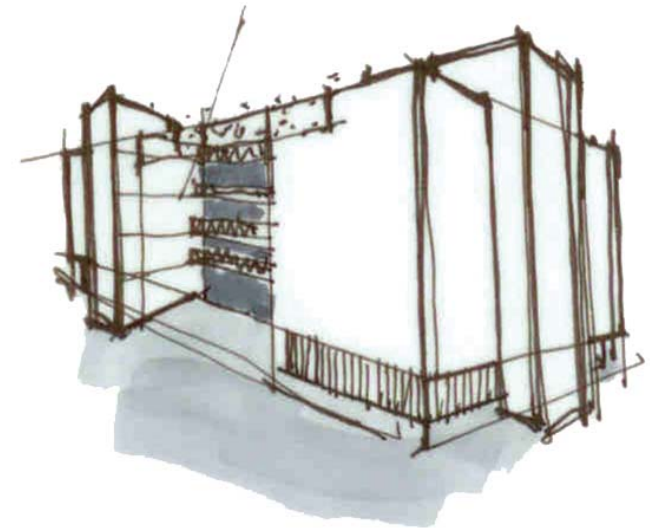


Figure 10.22

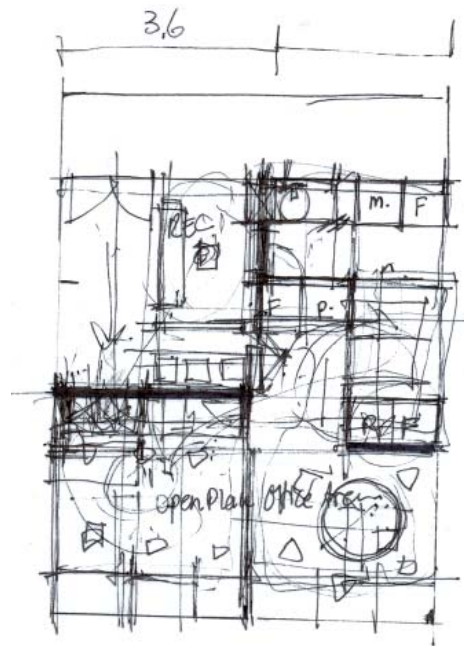


Figure 10.23 Initial office layout plans

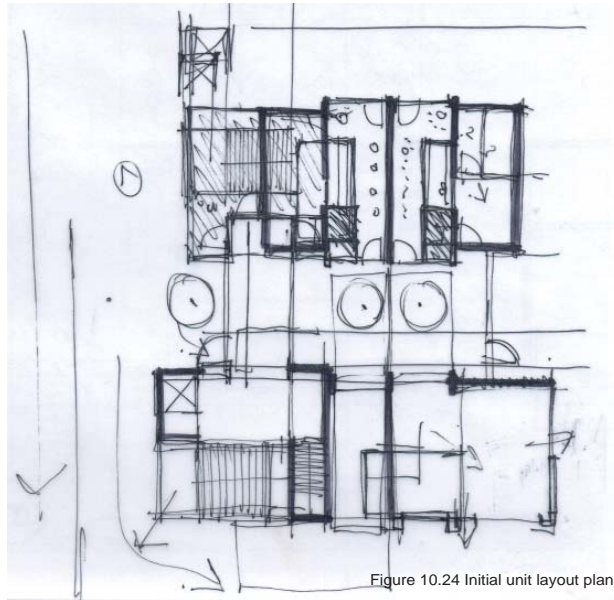


Figure 10.24 Initial unit layout plans

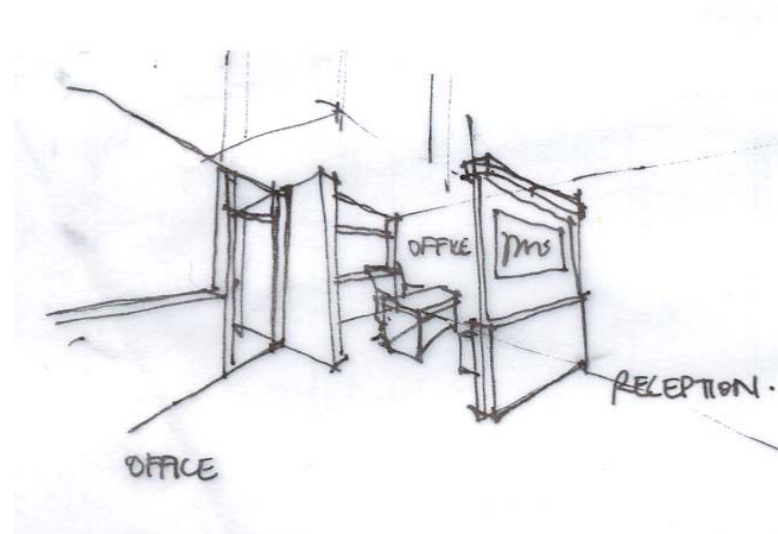


Figure 10.25 Interior View of office and reception



Concept Model Development

Concept Model TWO



Figure 10.26



Figure 10.27

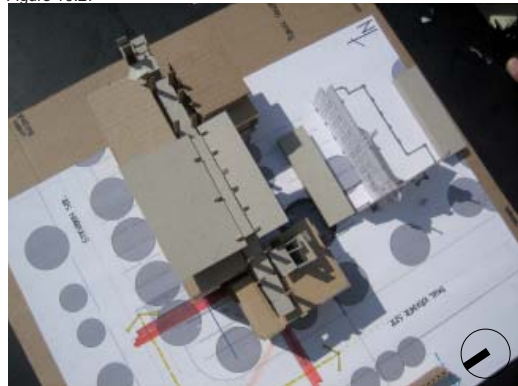


Figure 10.28

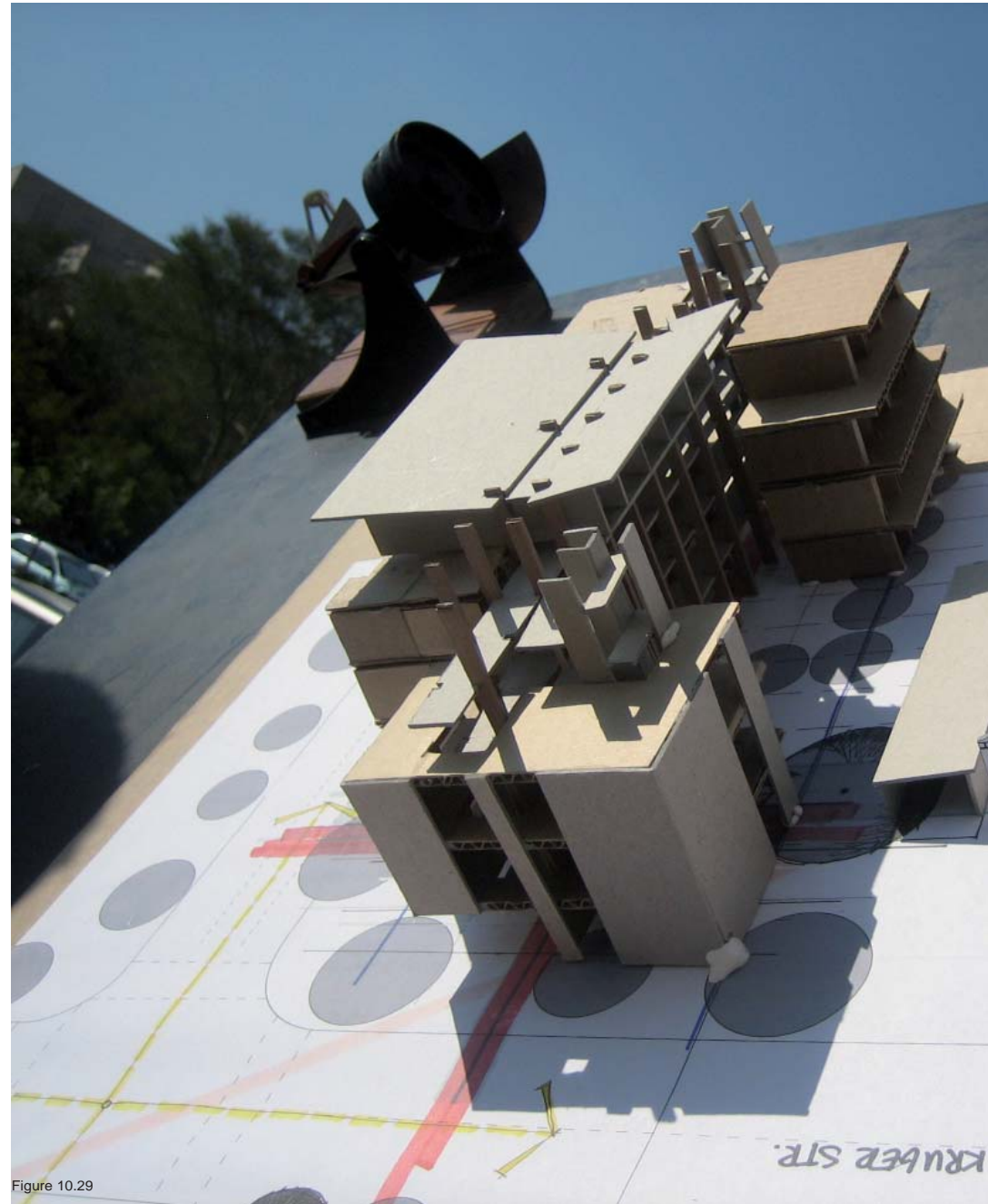


Figure 10.29



The second concept model was the first built at a scale of 1:200. In this model the axes of the intersection are mirrored within the building in an attempt to strengthen the orthogonal movement routes- both vehicular and pedestrian. Circulation towers remain directly on these axes with the western circulation tower still in line with the circulation towers of the synagogue. From a regeneration point of view the circulation routes are the most active part of the building and are exposed to activate the space.

The mass of the building continues to be shaped in such a manner as to not cast a shadow on the Old Synagogue at any point in time. The double lean-to roof¹ alludes to the position of the synagogue from the northern side of the proposed building. The large gutter positioned above the circulation bridge emphasises its position.

A generous overhang covers a portion of the pavement which is typical for Pretoria's buildings.

Already at this stage the structural grid of the synagogue informs the rhythm and structure of the proposed building. Openings hint at secondary visual links to the surrounding context.

The floor to floor height is 4m to blur the transition from the exterior to interior spaces while allowing for maximum flexibility of the interior space.

Concept Model Criticism

- The point of intersection of the two axes is weak
- Circulation routes are still not strong enough as this is a central to the design
- The public courtyard is shaded throughout the day in winter
- The southern facade which faces the synagogue loses the human scale
- spaces in the atrium seem dark and threatening
- threshold of where to old and the new meet is unresolved

1. Peters (1998:177-180)

Sketches

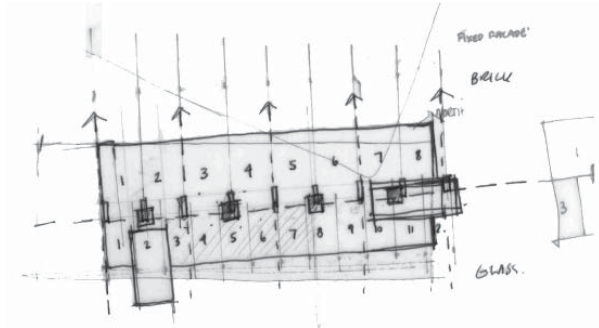


Figure 10.30

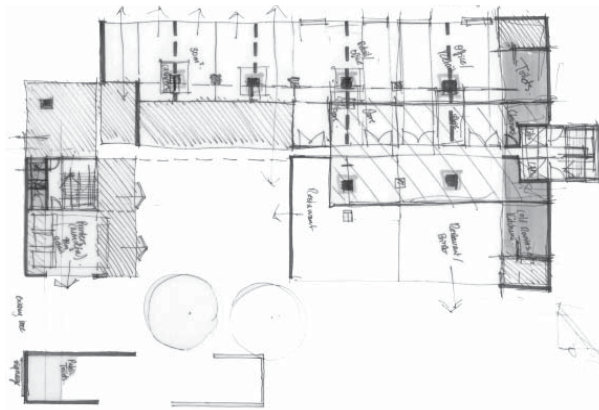


Figure 10.31

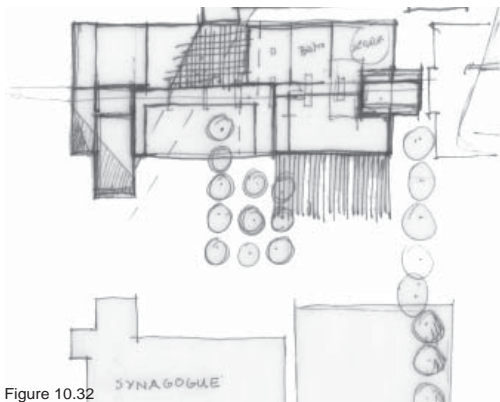


Figure 10.32

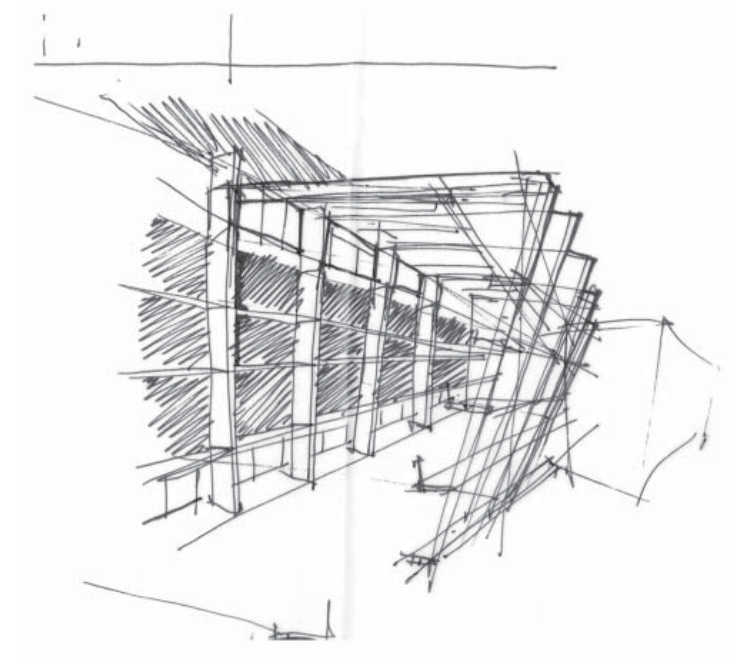


Figure 10.33 Sketch of atrium

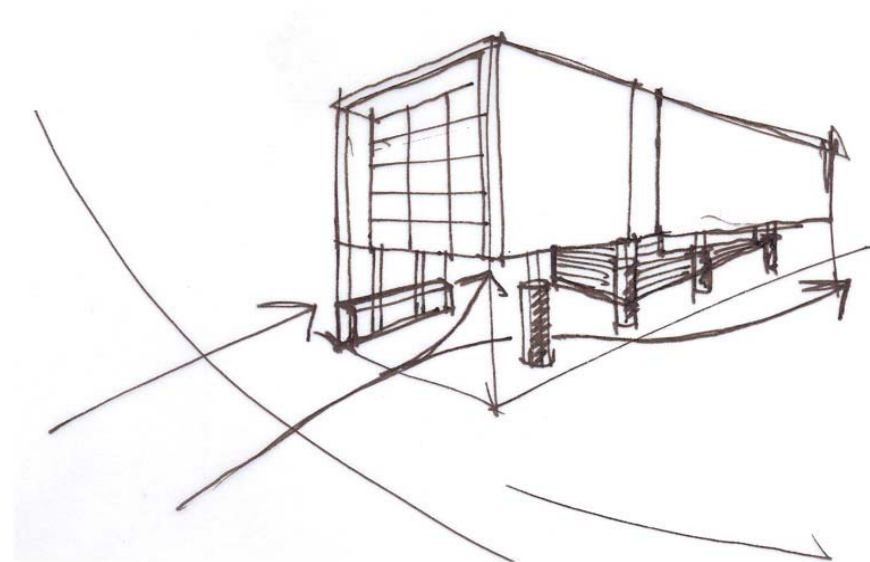


Figure 10.34 Sketch of atrium

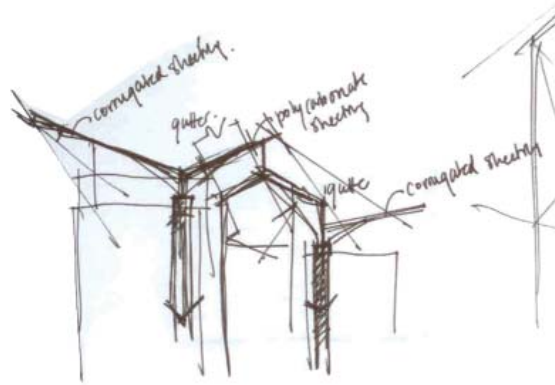


Figure 10.35

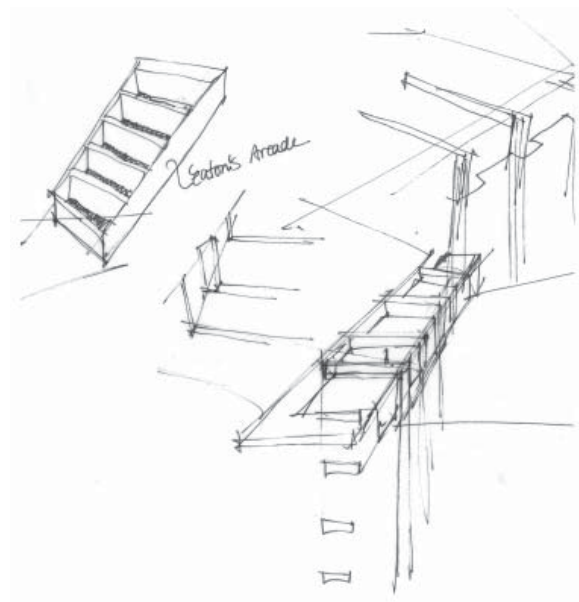


Figure 10.38



Figure 10.36

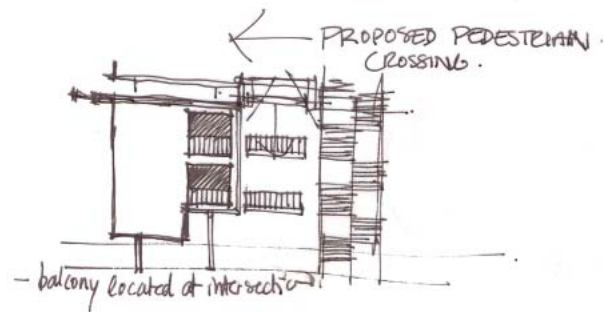


Figure 10.37

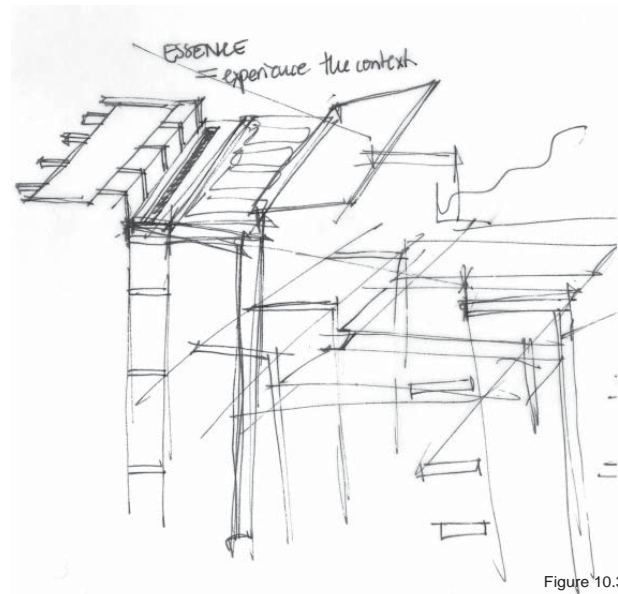


Figure 10.39



Concept Model Development

Concept Model THREE



Figure 10.40

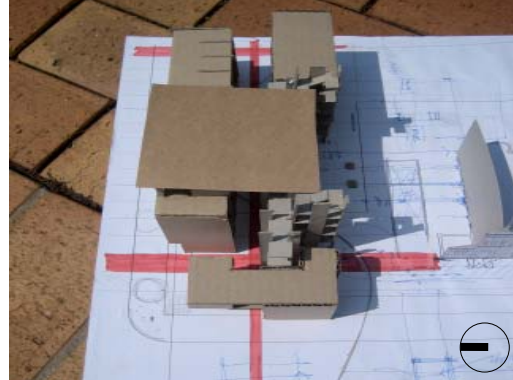


Figure 10.41



Figure 10.42

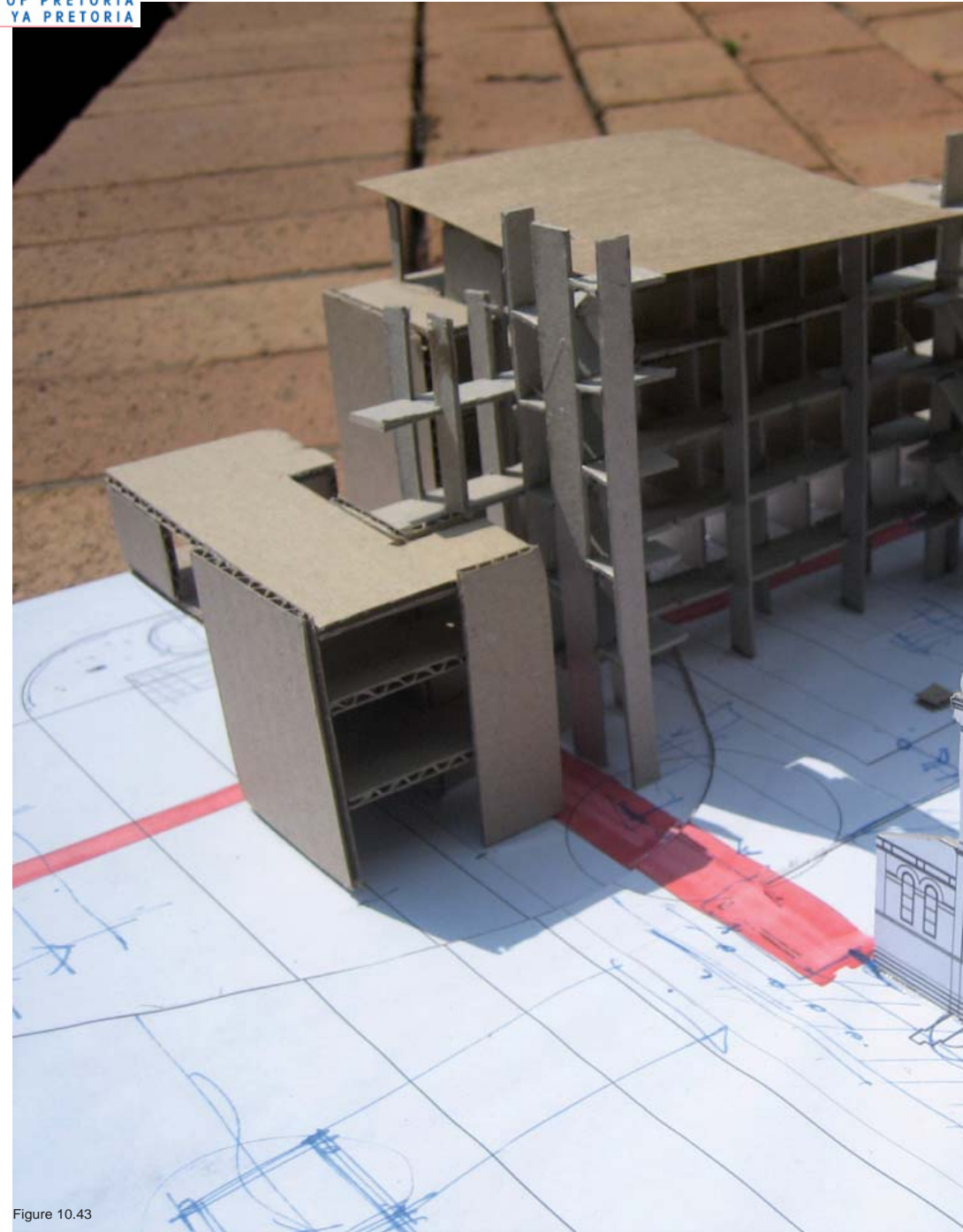


Figure 10.43



In an attempt to strengthen the concept of exposing the most active part of the building, the building was pulled apart creating a large internal atrium in which the circulation bridges are located. These bridges form the spine and core of the building that link the three buildings.

The circulation towers are moved off the axes and are positioned on either side of the public courtyard that faces the synagogue- emphasising its enclosure. The structural grid of the building is emphasised throughout.

Concept Model Criticism

- the staircases become a barrier between the building and the courtyard
- indoor and outdoor spaces are unclear
- the transition from public to private spaces remains undefined
- the roof is unresolved
- threshold where the old and the new meet remains unresolved
- southern courtyard remains shaded throughout most of the day in winter
- no defined or secure access point to the building

Sketches

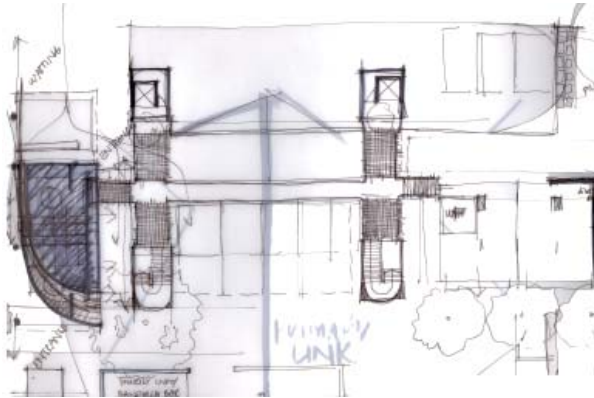


Figure 10.44

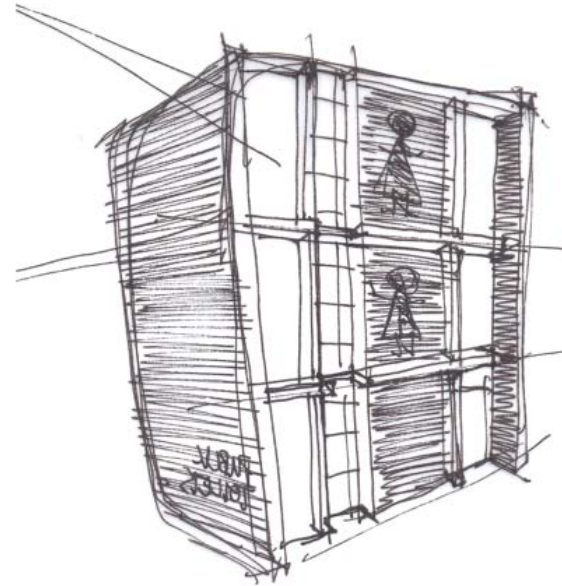


Figure 10.46

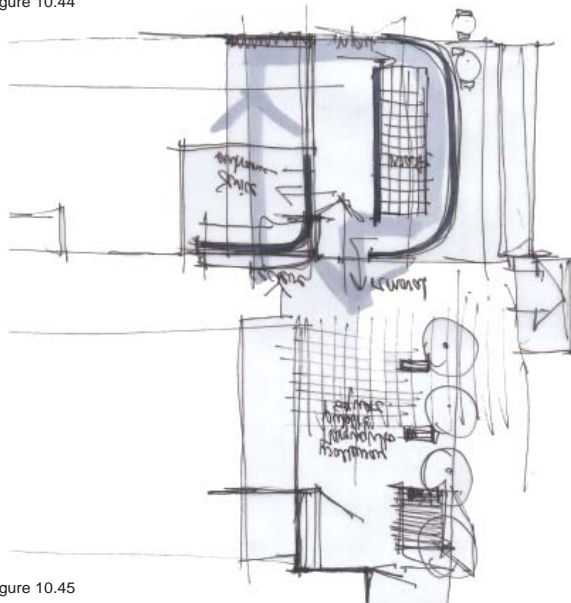


Figure 10.45

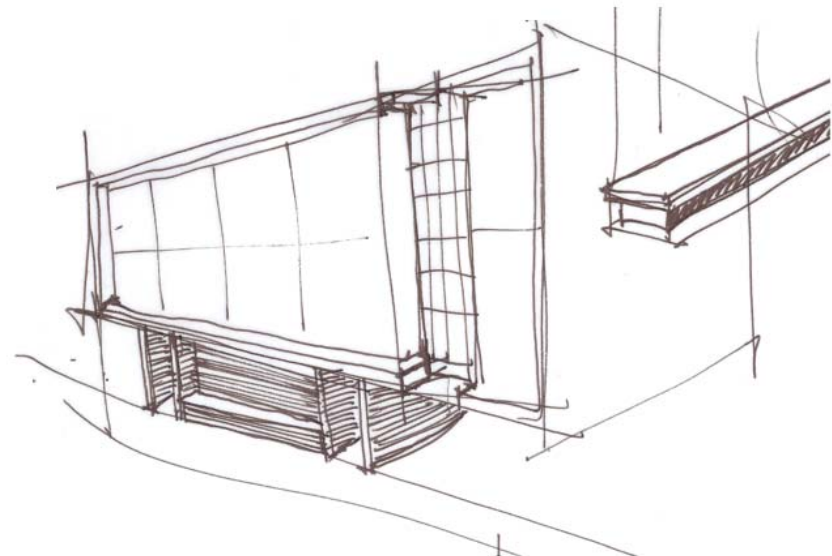


Figure 10.47

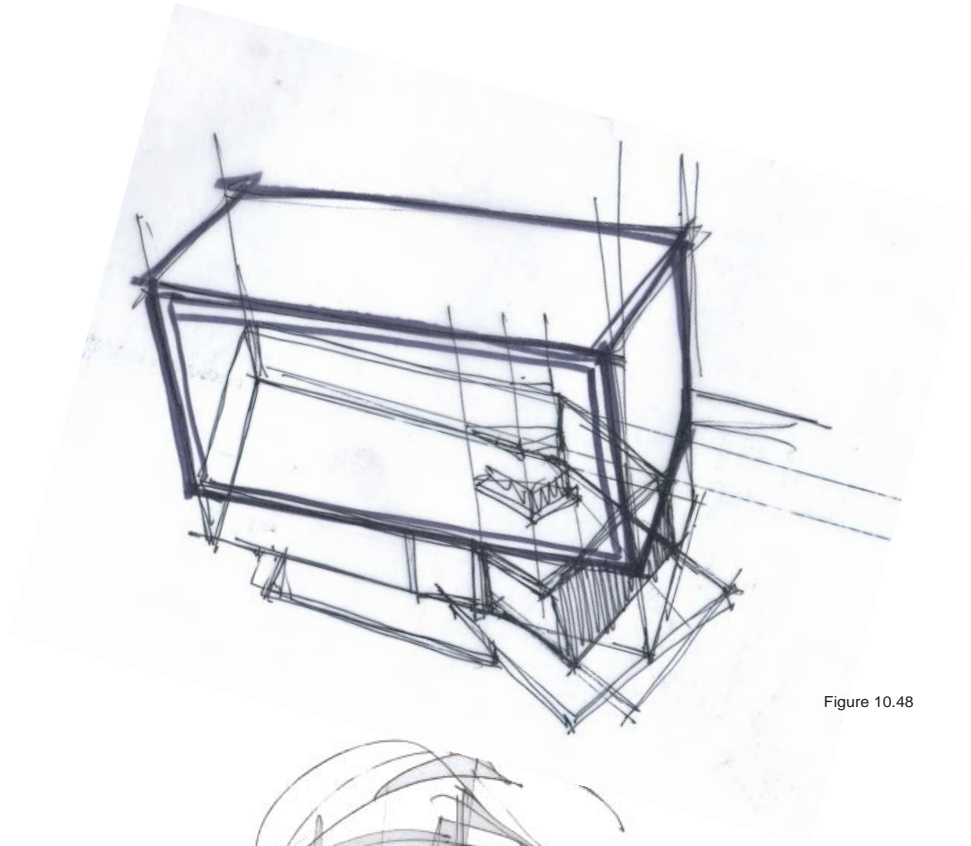


Figure 10.48

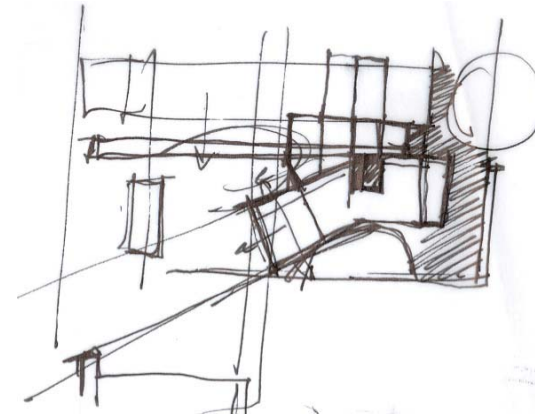


Figure 10.50

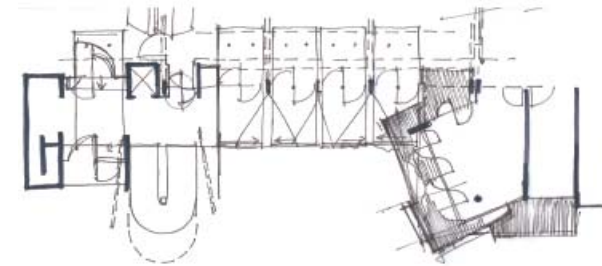
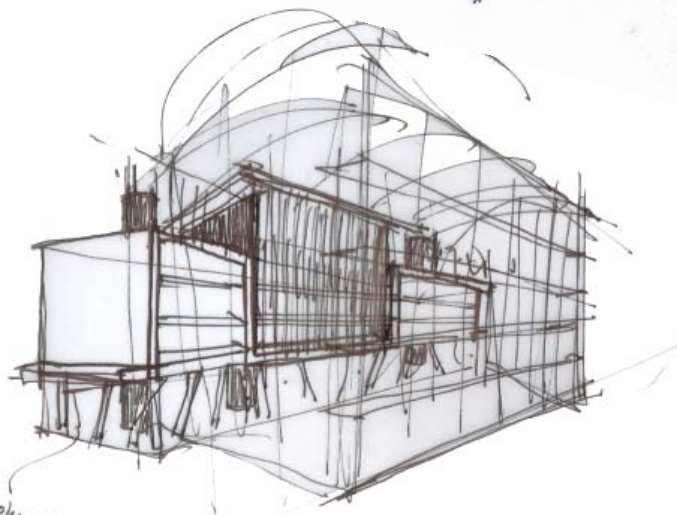


Figure 10.51



polycarbonate screens
+ glam

Figure 10.49

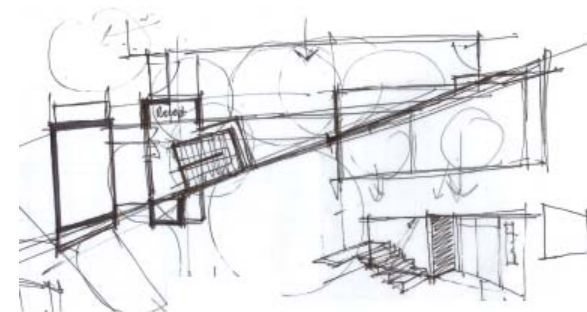


Figure 10.52



Concept Model Development

Concept Model FOUR



Figure 10.53



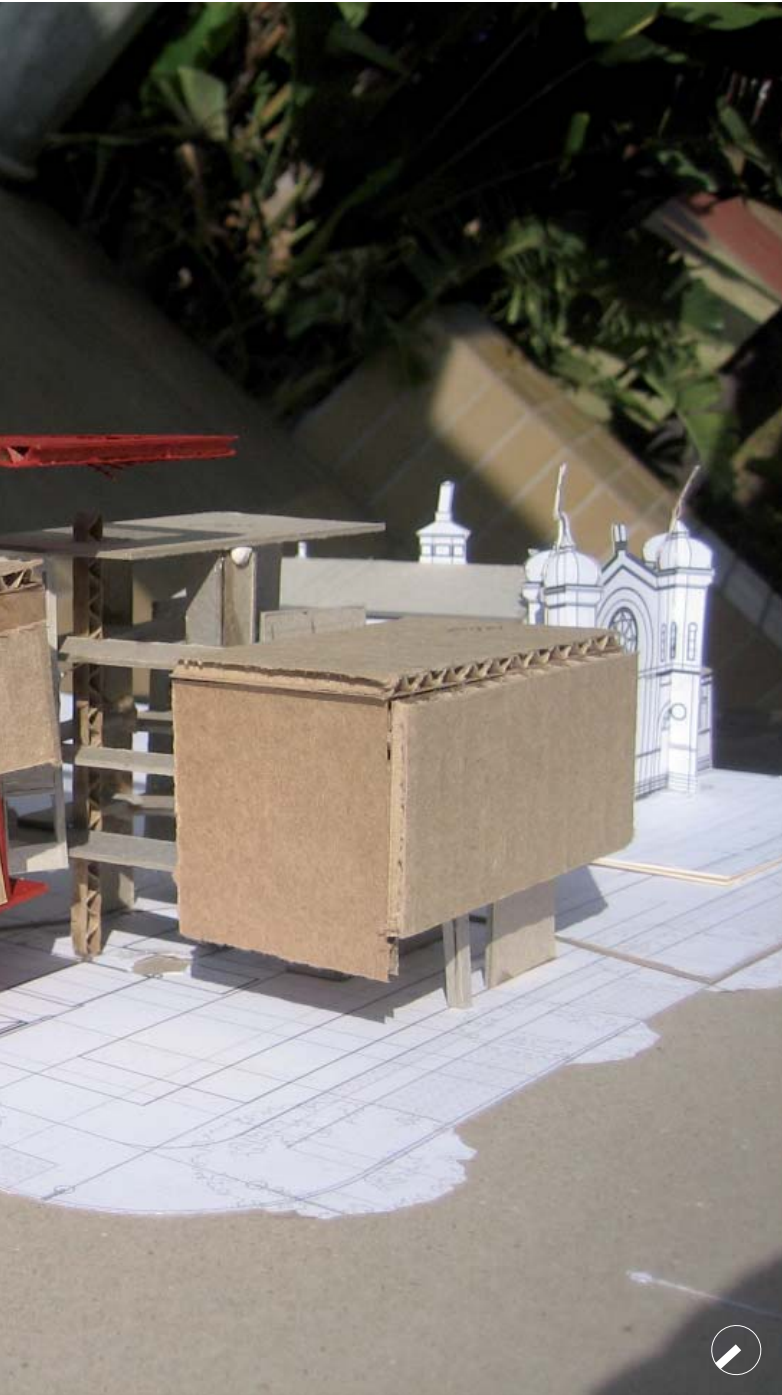
Figure 10.54



Figure 10.55



Figure 10.56



The final concept model was built as part of the technical investigation to determine the position of openings in the northern facade in order to allow northern light to penetrate through to the southern courtyard. The investigation also examined the position and height of the roof. Several options (coloured in red on the model) were considered and explored by placing the model on the solar scope and documenting the results. Ultimately none of the original options proved to give the desired result.

The circulation bridges remain exposed while the western circulation tower is in its previous position but has become a design element itself. The eastern tower has been internalised. Services are located on the eastern and semi-private edge of the building.

Access to the building is controlled and entrances are defined. The protruding staircase begins to address the threshold between the synagogue and the proposed building.

Concept Model Criticism

- The roofs are still partially unresolved
- facade detailing is still unresolved

Sketches

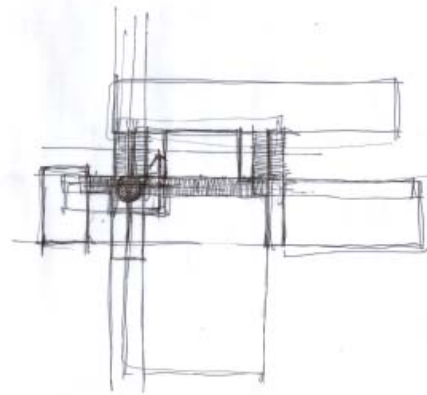


Figure 10.57

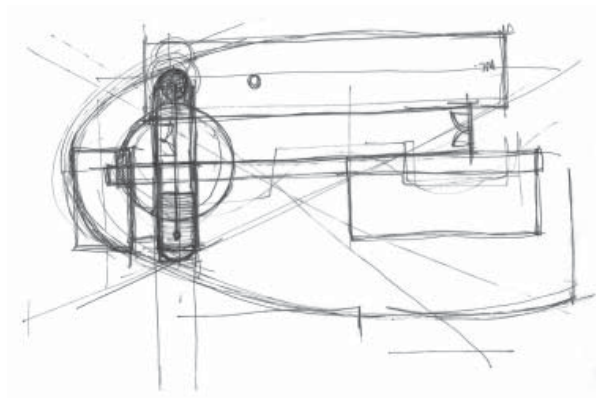


Figure 10.58

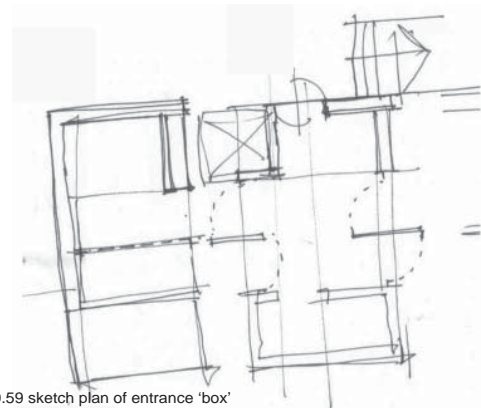


Figure 10.59 sketch plan of entrance 'box'

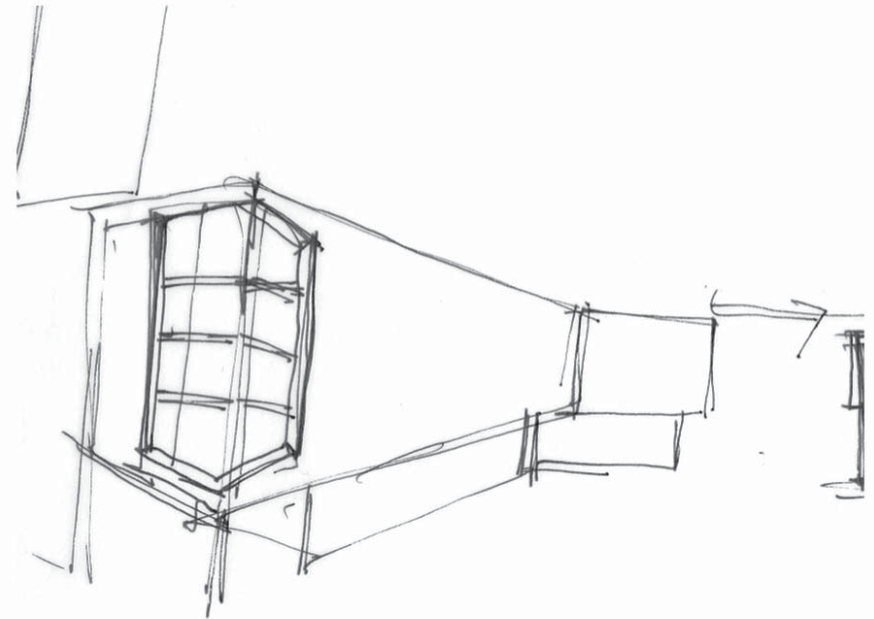


Figure 10.60

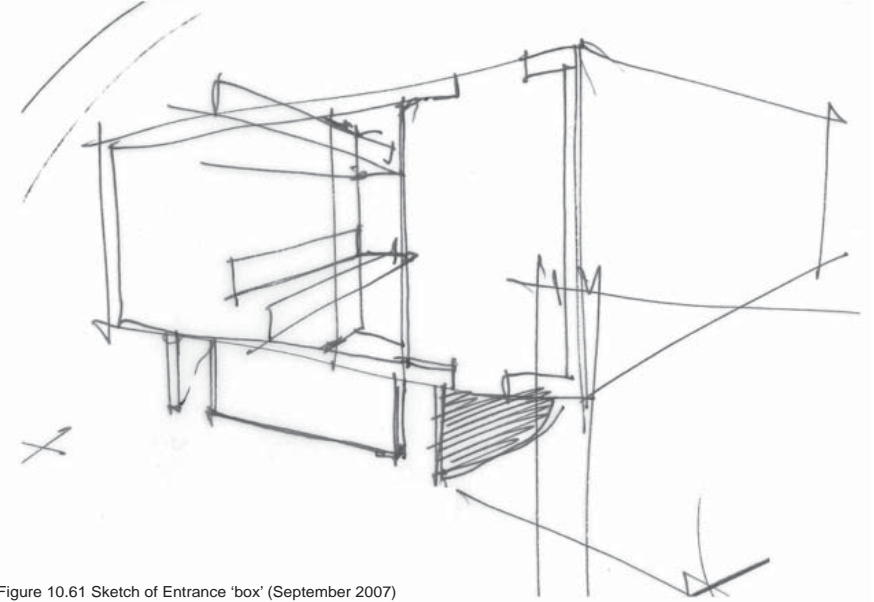


Figure 10.61 Sketch of Entrance 'box' (September 2007)

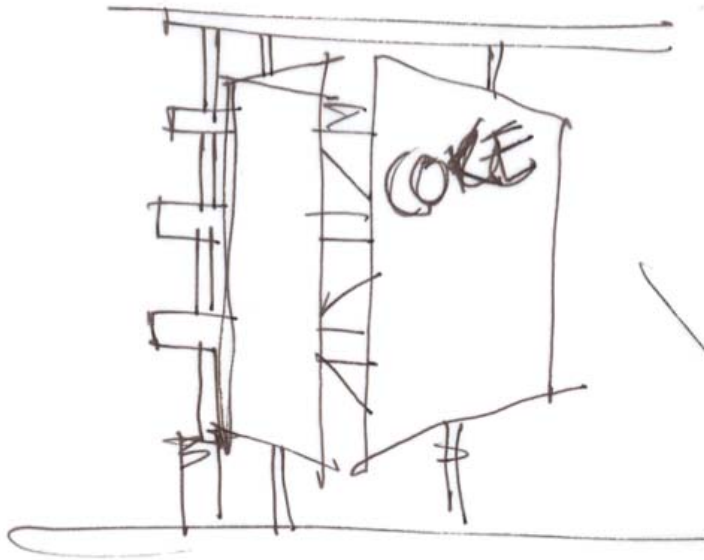


Figure 10.62

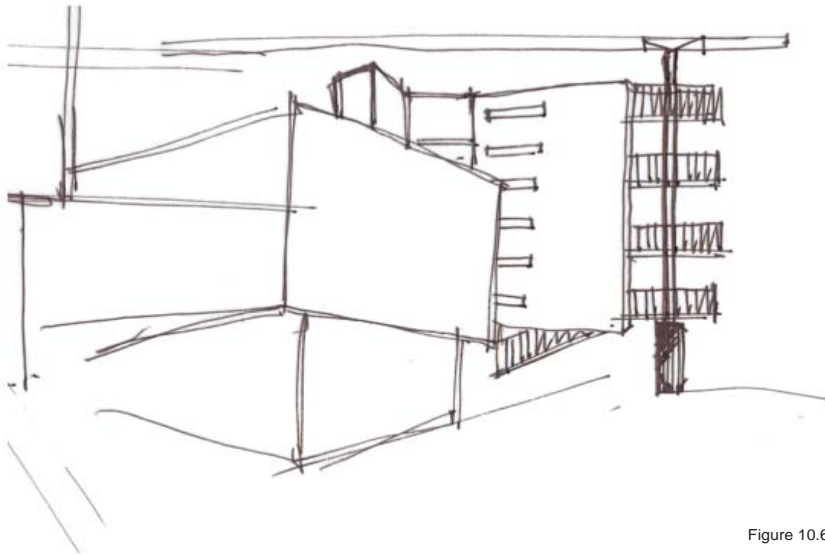


Figure 10.63

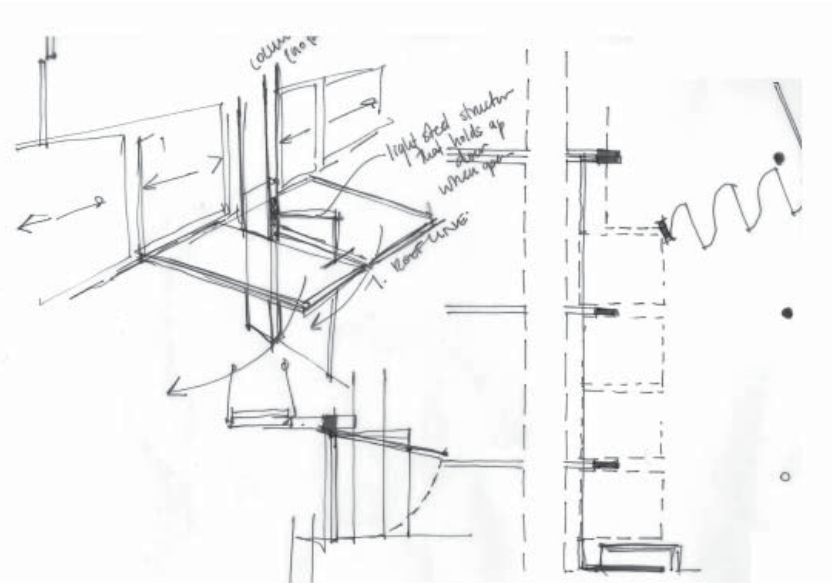


Figure 10.65 Sketch of threshold between indoor and outdoor space



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Technical Investigation

The following text is supplementary to the set of drawings and motivates decisions made on a technical level. The objective of the investigation is to establish an appropriate strategy to achieve effective daylighting in the building. The investigation includes a historical study that, in conjunction with a technical investigation, informs design decisions.

With growing environmental concerns and the recent energy shortages in South Africa, the implementation of sustainable principles is elementary. The construction industry continues to be the primary energy and resource consumer. Therefore, it is the responsibility of the designer to make decisions that minimally impact on the environment. Although, responsible decision-making encompasses many more issues such as passive systems, material sourcing, and construction processes, the investigation focuses on lighting and the resulting thermal environment. The objective is to ensure energy-independent occupant comfort as far as possible.

Historical Study

The historical study examines materials and shading devices used by the South African architect Norman Eaton in his response to local climatic conditions. The investigation is limited to the study of Eaton's "protective concrete window hoods"¹ as used in several Pretoria houses. In his later houses, climatic sheltering was provided by greater overhangs, while in other buildings, such as the Wachthuis in Pretoria (1955- 1960) and the Nederland's Bank in Durban (1961-1965), different materials (i.e. steel and concrete block) are used. These differing materials will not be covered in the investigation.

The Pretoria-trained architect Norman Eaton is highly recognised for his contribution to the development of modern architecture in South Africa. His work displays a sensitive local adaptation of the International Style with regard to regional materials selection and climatic design. His approach is in contrast to his rand counterpart, Rex Martienssen, who was bound by the traditional forms and materials of the International Style.² Eaton's approach allowed him to rise above the universality of the style and develop an individual "discernable African flavour".³ At the time, Eaton commented:

"The explanation is that I am working in Africa... naturally I am more influenced by Africa because I live here and travel here and my main interest is in Africa rather than in the Continent or the USA or anywhere else."⁴

Eaton's Influences:

Eaton's approach is attributed to a wide range of eclectic influences. These influences include Le Corbusier's method and approach to design, Frank Lloyd Wright's integrated approach to architecture and its immediate context, as well as the use of traditional materials by the local architect, Gordon Leith.⁵

Eaton's climatic response

Eaton's responsive approach is manifested in his response to local site conditions and landscape characteristics,⁶ the location of functions within the building,⁷ the orientation of buildings,⁸ natural ventilation,⁹ and shading, which is evident in all of his work.

The protective concrete window hoods

The "protective concrete window hood" made its appearance in Eaton's very first commission, Boyes House in Brooklyn, Pretoria. The long, thin concrete hood, located above the strip window on the northern façade, provides shelter from the rain and the hot summer sun, while emphasising the horizontality of the design. The cantilevering concrete hoods were typically 450 mm deep, tapered from 130 mm at the wall to 80 mm at their edge.¹⁰



Figure 11.02 De Loor House, Pretoria



Figure 11.03 Window & chimney detail, Nicolson House, Pretoria

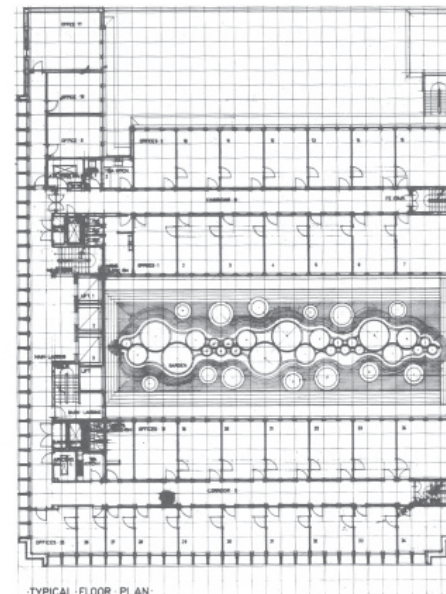


Figure 11.01 Floor Plan of the Nederlands Bank, Pretoria

1. Harrop Allin (1975: 28)

2. Harrop Allin (1975: 27)

3. Harrop Allin (1975: 119)

4. Harrop Allin (1975: 120)

5. Harrop Allin (1975: 36)

6. the horizontality of his designs harmonises with the natural horizon lines of the site as seen in the De Loor House, Muckleneuk, Pretoria (1937 - 1938); (Harrop Allin 1975: 31)

7. services and circulation spaces are located on the western facade with limited afternoon sun-penetration into the Nederlands Bank, Pretoria (1946-1953) (Harrop Allin 1975: 90)

8. south-west facing facades of the Nicolson House, Brooklyn, Pretoria (1935) are closed to the direction of prevailing rains and winds (Harrop Allin 1975: 119)

9. long and narrow plans allow cross-ventilation as in the Van der Merwe House, Pretoria (1940-1941) Harrop Allin (1975: 35)

10. Harrop Allin (1975:26-28)

Design Considerations

Building Mass Level

The investigation was conducted on two levels. Firstly, at a mass level, resulting from the identification of the public space located on the southern side of the building as a problem area due to the space being shaded throughout the day in mid-winter. The second level of investigation was on an individual unit level and focused on indoor light quality within residential and office units, both located on the northern façade of the proposed building. The addition of electrical lighting was examined at unit level.

On a mass level, the investigation informed bulk massing, the position of voids, and the height and position of roofs in order to improve the thermal and natural light quality of the identified problem area. (see figure 11.04)

On a unit level, the investigation informed both the position and the materials used for the shading devices, as well as the position and height of the windows. Electrical lighting is examined in conjunction with the achieved natural lighting scenario.

Orientation

The building is situated on a restricted site. Its long side runs in an east-west direction, exposing a large portion of the building to northern light and shading the public space located on the southern side of the building between the Old Synagogue and the new building. While the northern orientation is advantageous concerning sunlight and dominant north-eastern summer winds for ventilation purposes, the southern side of the building, which opens onto the public space, is exposed to the direction of prevailing winter winds and rain.

Form

The narrow form of the building, being primarily informed by its surrounding historical context, allows for good cross ventilation and natural light penetration into interior spaces and thus, is suited to the proposed office and residential functions. The south-facing atrium can be opened in summer to ventilate the partially enclosed interior public space while simultaneously, allowing protection from summer rain and winter winds when required. Ventilation at a high level allows for rising hot air to escape the atrium and aids cross ventilation.

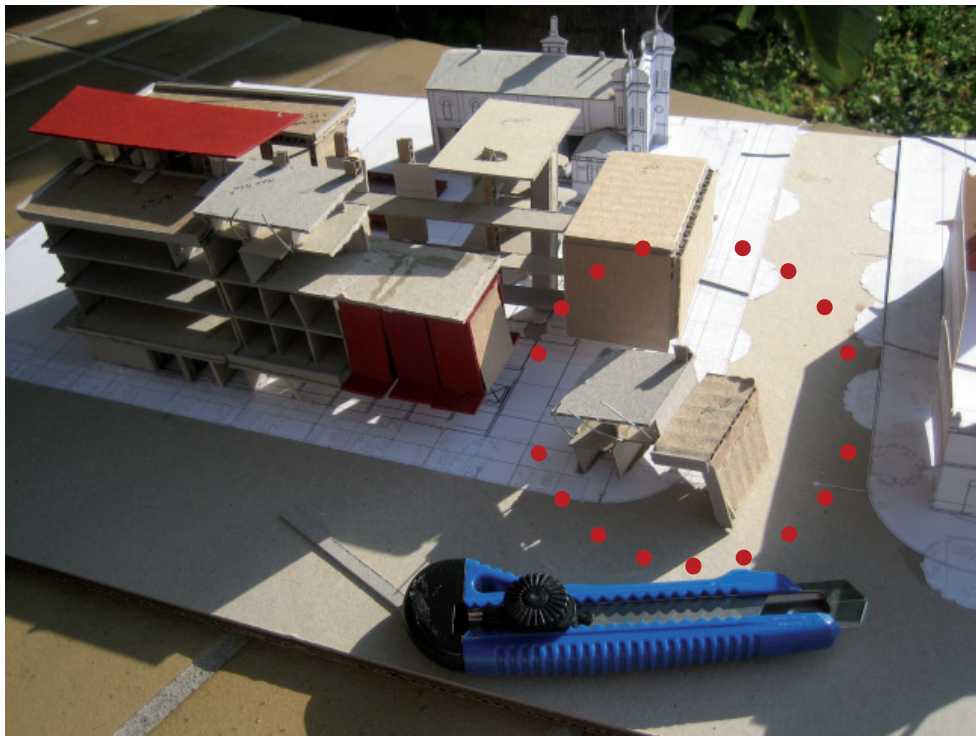


Figure 11.04 Modifying model

Structure

The primary reinforced concrete structure of the building is based on a 7,6 m x 8,4 m grid, which is informed by its surrounding context. The structure consists of columns and beams, and it resists shear forces in the service cores, lift shafts and concrete slabs. This skeletal structure, not unlike Le Corbusier's "Domino Structure",¹¹ allows for flexibility within the building thus, accommodating future changes to the building programme.

The exposed circulation spine within the internal atrium is light in appearance. It is made of steel and reveals its construction.

Flexibility

Due to the adaptable nature of the proposed building and because of its variable functions, the building is designed to achieve flexibility. This is achieved by the bulk of interior walls consisting of dry-walling that can be easily moved to achieve required spaces. This reduces the overall weight of the building and allows for easy adaptation. Dry-walling achieves the required acoustic levels and can be re-used.

Similarly, services are provided by means of vertical shafts. Indoor floor-to-ceiling heights are 3 345 mm high (this height is reduced in the top residential units) to accommodate suspended ceilings in the event of then being required for effective distribution of services.

Skin

The building skin on ground level is primarily, glazed, allowing for visual continuity, allowing for the user's experience of the existing context on a human scale. Only serviced areas are enclosed. Above ground level, the building skin is primarily off-shutter concrete with glazed openings.

Scale

Due to the large scale of the multi-storey building, horizontal elements have been used throughout the building to reduce the scale of the building to a human scale. On the northern edge of the building, a large con-

crete overhang provides shelter from the sun and rain in summer while defining the circulation space. Similarly, on the upper levels, the circulation bridges restrict and define movement paths, entry points and seating areas throughout the building. A large horizontal plane, situated between the public exterior space and the interior atrium, blurs the threshold between the two and, once again, reduces the scale on entry into the building. The tree situated in the courtyard, in addition to providing shade during summer, also reduces the scale and defines the space to comfortably accommodate seating.

11. Weston (1996:7-10)



Finer Scale and Resolution

Recently, the City of Tshwane commissioned Ngedweni Design and the Trinity Session to develop a proposal for public art for the greater metropolitan council of Tshwane. The proposal¹² for public art is in line with the vision for Tshwane as a whole and differentiates between approaches for different regions within Tshwane, based on their individual strengths and weaknesses.

Church Street and Paul Kruger Streets have been identified¹³ as “the two most ceremonial¹⁴ routes in Tshwane”. In line with the urban framework¹⁵ of the area the objective is that each road:¹⁶

- “is as wide as possible;
- is an intensively developed Open Space;
- contains at least two rows of trees on either side of the road as well as one row within the median island, if relevant;
- contains trees responding to ceremonial, place-making, legibility, structuring functioning;
- provides wide pedestrian sidewalks on either side of the road;
- does not contain overhead utilities;
- contains public art and street furniture”

12. Ngedweni Design & the Trinity Session (2007:29-34)

Ngedweni Design and the Trinity Session define public art¹⁷ as a

13. Ngedweni Design & the Trinity Session (2007:31)

“loosely used term that refers to works of art in any media or discipline that are planned and executed with the specific intention of being presented or executed in the public domain”.

14. “Ceremonial routes are the most important symbolic streets in the city and are typically used during important festivals and celebrations. They are the streets that carry the image of the city and are typically tourist attractions.” Ngedweni Design & the Trinity Session (2007:31)

With this in mind, architecture can be described as a form of art that embodies both functional and spatial qualities. Located in the public realm, architecture can potentially function as a form of public art. In the same way as public art is used to change the perception of a place as a means to urban regeneration, architecture can potentially achieve the same – and more.

15. refer to p 34

16. Ngedweni Design & the Trinity Session (2007:31)

17. Ngedweni Design & the Trinity Session (2007:2)

Proposal for Public Art

The proposed building is situated on a public space as a functional piece of sculpture that allows for strategically placed visual and physical accessibility. The building, generated by its surrounding context, challenges the public's current perception of the site by allowing the user to become aware of the surrounding historically significant buildings. In this manner, the building engages the user as well as passers-by.

In addition to the proposed building, other forms of public art should form part of the activation process¹⁸ on site. A series of activities and events should take place on site prior to the construction of the building itself:

The process should begin with the activation of the intersection. This may be done by placing a large of grass installation in the middle of the intersection and encouraging the public to approach it and take in the impressive views both towards the Union Buildings and south towards Church Square. The intention of the installation would be to challenge the public's perception of their daily surroundings in addition to documenting the public's reactions. The documentation is then to be exhibited on the site as a public photographic exhibition.¹⁹ The objective is to generate an interest in the site while physically activating it.

Physical forms of public art on the site, such as sculptures, should be minimal with a focus on functionality. Street furniture and lighting as well as a drinking fountain (refer to figure 11.07) located below the main staircase become opportunities for artistic yet functional interventions. A tactile 'story-board' attached to the concrete balustrade of the viewing balcony of the second floor of the main staircase should be commissioned by an artist. The 'storey-board' should inform the user of his surroundings while telling of the historical events that took place on the site. The artistic qualities should be manifest through the pattern detail of the floor of the city that runs throughout the building. This approach should also be manifest in the texture of interior finishes (refer to figure 11.05).

18. refer to p60

19. refer to fig 8.02 for conceptual sequence of activities on site



Figure 11.05 Mosaic Detail of Column base at the Constitutional Court in Braamfontein



Figure 11.06 Winding Mosaic Bench, Park Guëll, Barcelona



Figure 11.07 Mosaic Fountain, Park Guëll, Barcelona



Other forms of public art to take place on site should be primarily auditory reflecting the practices and traditions of Jewish culture. In doing so, such performances allude to the many hearings that took place in the Old Synagogue. The partially removed additional building north of the Synagogue should be used as a 'stage' for such events.



Figure 11.08 Dustbin Poetry by Jacques Coetzer

Investigation

Natural Lighting

Mass level

By means of placing a 1:200 scale paper model on the solarscope and examining the existing daylighting scenario, followed by making adjustments to the model, a building mass was established that allowed light to penetrate into the identified problem area. Natural lighting scenarios were examined on the summer and winter solstices at 08:00, 12:00 and 16:00.²⁰

Initially, it was assumed that by removing three sections on the lower levels of the model (coloured red on model - figure 8.0?), light would penetrate through the central atrium space into the identified problem area. However, as a result of the investigation, it was established that only by removing the top levels of the model would light penetrate into the public space on the southern side of the building. Subsequently, a large multiple volume opening was punched through the northern façade in order to allow northern lighting to penetrate deep into the most shaded area of the public space. The result strengthens the argument for activating the public space in an attempt to bring about urban regeneration. In addition, by introducing louvers on the southern edge of the roof, light is able to penetrate from above into the space below during winter months. While the thermal impact of direct light in winter is minimal, the impact on the perceived thermal environment of the southern public space is notable.

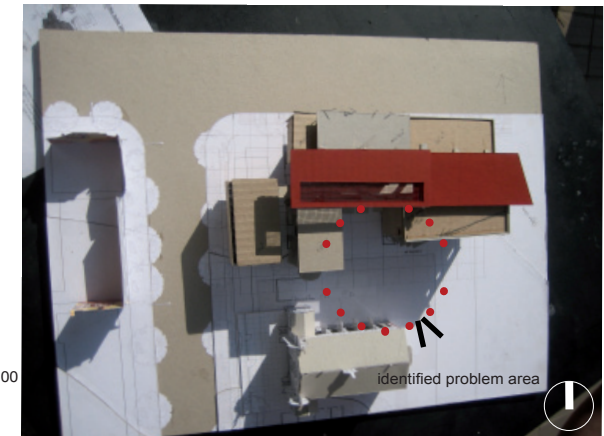
The scenario in summer differs greatly from the winter scenario. In summer, the public space is exposed to sunlight for the bulk of the day, with minimal shade in the morning and afternoon. By means of the sun study, the position of a large indigenous deciduous tree was determined to strategically provide shade during summer months.

20. refer to Appendix E for the full photographic documentation of the technical investigation



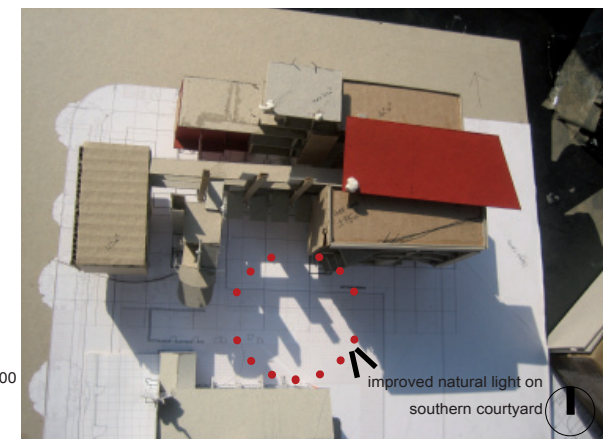
21 December 12:00

Figure 11.09 Sun study and documentation



21 July 12:00

Figure 11.10 Problem Identification



21 July 16:00

Figure 11.11 Sun investigation



Determining Required Net Glazing

Individual Unit Level

The northern block of the building houses a variety of functions including both office and residential accommodation. It is important that both functions are adequately provided for in terms of natural lighting and its impact on the thermal environment. Occupant comfort ranges from 16° to 32° Celsius, with optimum temperature between 21° and 22° for a seated person exposed to air movement of 1 m/s.²¹ The amount of light that enters though the glazing has a significant impact on the indoor thermal environment, especially due to the high heat retention properties of the exposed concrete structure. By means of a further investigation, the depth of direct northern light penetration into the interior space was determined and limited by means of lightshelves that further improve luminance distribution and reduce glare. Lightshelves are especially effective in a clear-sky climate such as in South Africa.

The following equation²² assumes a rectangular room where the depth of the space is not more than 2.5 times the window height. This is the case with each individual bay on the northern facade of the building.

$$\text{Required Net Glazing} = \frac{2 \times \text{Average Daylight Factor} \times \text{Total Area of Interior Surfaces} \times (1 - \text{Weighted Average reflectance of all interior surfaces})}{\text{Visual Transmittance} \times \text{Vertical Angle of Sky visible from centre of Window}}$$

Average Daylight factor	2.0
(for average-light spaces: suitable for offices using visual display terminals (VDTs): ambient lighting of max 300lux is appropriate)	
Total Area of Interior Surfaces	96.67m ²
2(6960 x 3345) + 2(3600 x 6960)	
Area Weighted Average Reflectance	0.5
(default value)	
Visible Transmittance	0.5
(for medium sized windows)	
Vertical Angle of Sky	75°
(90° – obstruction angle of trees)	
Total Required Net Glazing	5.1m²

21. Holm (1996:5)

22. Lee, O'Connor, Rubinstein & Selkowitz ([S.a.]:17)

Window Design Parameters

The following parameters were set up to determine a strategy for glazing on the northern facade of the building. They informed the decision making process.

Depth of Beam	795mm
Max Depth for Suspended ceilings	270mm
Desk Height = 750mm + 300mm	1050mm
Height of solid balustrade	1100mm
Height of steel balustrade	950mm

Depth of penetration (with no light shelf) $1.5 \times h$
 1st & 2nd floor: $1.5 \times (3345 - 270 - 50) = 1.5 \times 3025 = 4537.5\text{mm}$
 3rd & 4th floor: $1.5 \times (2755 - 270 - 50) = 1.5 \times 2435 = 3652.5\text{mm}$

Depth of penetration (with light shelf) $2.5 \times h$
 1st & 2nd floor: $2.5 \times (3345 - 270 - 50) = 2.5 \times 3025 = 756.25\text{mm}$
 3rd & 4th floor: $2.5 \times (2755 - 270 - 50) = 2.5 \times 2435 = 6087.5\text{mm}$

- Higher windows result in deeper light penetration
- Strip windows (horizontal window shapes) ensure a more uniform light distribution
- Avoidance of glare by minimising direct summer light and using splayed or round surfaces at window openings. Direct winter light gain up to 1600mm for desired heat gain

- Light shelf: ²³
 - improves luminance distribution and reduces glare
 - doubles as a shading device
 - exterior light shelf is better than an interior one
 - used only on north-facing facades
 - only has an impact in individual bays
 - positioned above any visible point in the room
 - to be positioned in line with underside of beams
 - painted white/ diffusely specular to improve luminance distribution and reduce glare

- Ceiling to be smooth and painted white
- Deep facades act as a buffer zone for shading
- In a room deeper than 4600mm, provide vertical illumination on back wall – within two feet of back wall) with a cool light temperature of 4000K

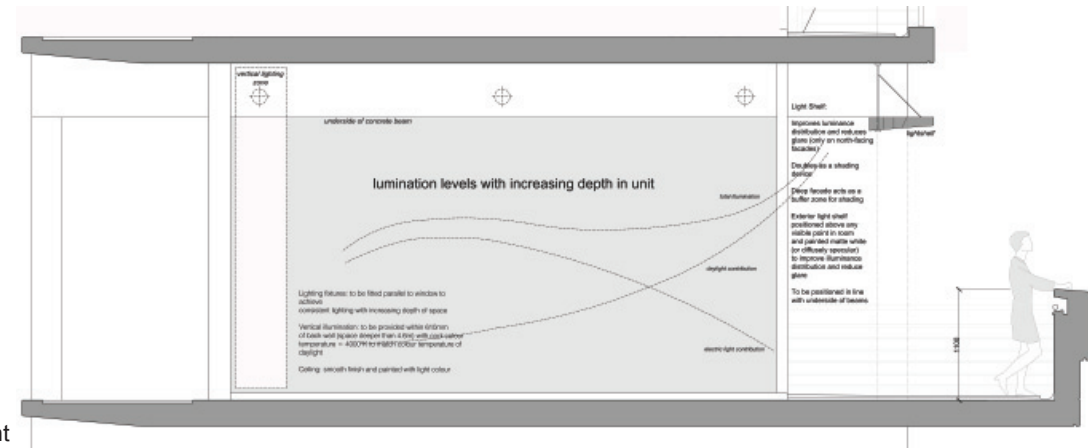


Figure 11.12 Illumination with increasing depth of unit

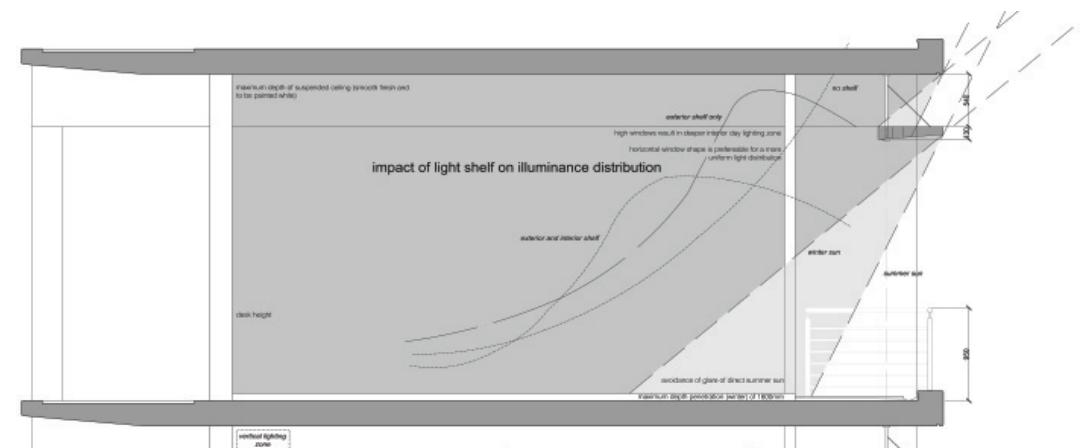


Figure 11.13 Impact of light shelf on illuminance distribution

23. Lee et al ([S.a.]:14)

especially for those working in close proximity to glazed surfaces. This will also allow for improved passive heat gain in winter. Similarly double glazing is required on the southern façade to allow for large openings that permit occupants the benefit of viewing the synagogue without compromising the indoor thermal comfort. Large glazed areas on the southern side of the building ensure high quality light distribution in the interior.²⁴

The Visual Transmittance is slightly reduced when using clear double glazing (VT single glazing = 0,89 in comparison to VT double glazing = 0,80), but the impact on the indoor light quality is minimal, with its benefit evident in the improved thermal properties.

Window shapes have an impact on the interior lighting quality. The greater the continuity of glazing, the more uniform the lighting distribution is within the space. Therefore, the window openings in the office spaces are horizontal rather than vertical. Breaks between windows are limited to avoid a contrast between light and dark, which results in increased glare. Window head height is as high as possible in all cases to allow for deep daylighting within the interior units.²⁵

A deep-façade approach has been taken to create a buffer zone to allow for effective lighting and shading control. The introduction of lightshelves emphasises the horizontality of the northern façade, while allowing for diffused light to enter more deeply into the interior space. These envelope features improve daylight distribution and help control glare. In addition, splayed and rounded window openings that soften light contrasts have been implemented in office units.

Electrical Lighting:

Electrical lighting is to be introduced parallel to the glazing to ensure consistent lighting levels with increasing depth of individual units. The installation of an automatic lighting system with a dimming device is proposed.

Material Selection

Two different types of shading devices were examined for use as lightshelves. While vertical louvres have a minimal heat gain and are effective for shading, they offer a limited surface for reflecting light deeper into the interior space. Based on this evaluation, it was determined to use a pre-cast concrete light shelf with a matte white or diffusely specular finish to minimise heat gain and maximise its reflective qualities.

Glazing

Due to the limited space available and the resulting efficient use of interior space, it was decided that windows on both the northern and the southern façades should have double glazing to ensure occupant comfort and reduce temperature fluctuations within the space. This reduces heat loss through single glazed windowpanes and ensures occupant comfort,

24. Lee *et al* ([S.a.]:13)

25. Lee *et al* ([S.a.]:11-14)



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Tectonic Resolution

The beauty of architecture lies in its detailed resolution as it is at this scale that the user comes into physical contact with the building.

The following chapter explores the tectonic resolution of the proposed building.

Introduction

In essence, the building is a block of solid mass that has been carved into creating voids that direct the user's attention to the surrounding context while simultaneously exposing activity within the building. This reflects the process of deriving a form for the selected site. The focus of this dissertation is on the activation of the site in order to bring about urban regeneration while allowing the introduction of public art to change the public's perception of the site. For this reason, the circulation bridges that form the most active part of the building are dramatically exposed.

Concrete Entrance Box

The main entrance to the building is situated directly on the north-south visual axis located on the western edge of the site, parallel to the proposed pedestrianised section of Paul Kruger Street. The off-shutter concrete 'entrance box' frames the view of the onion dome of the synagogue

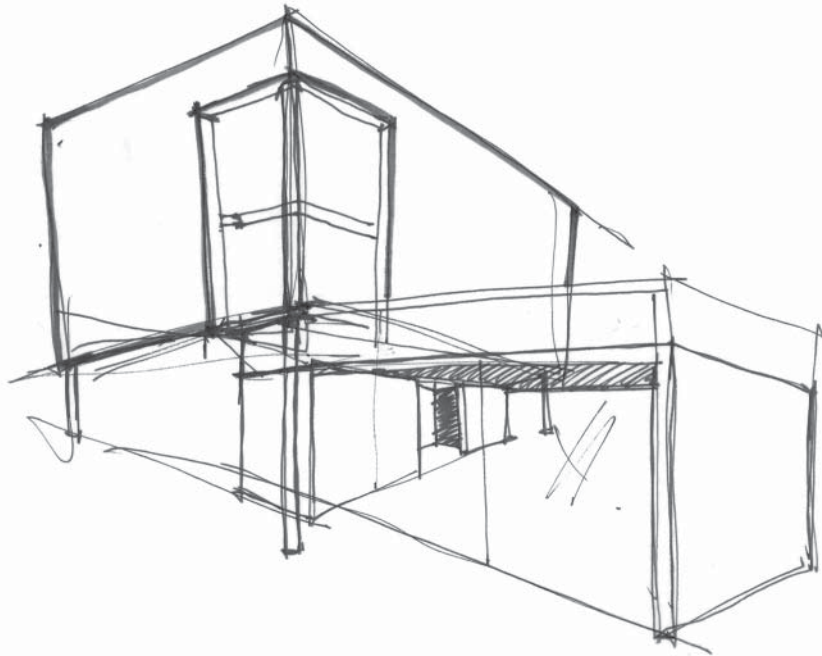


Figure 12.01 Concrete 'Entrance Box'

when approaching the building from the north. The concrete 'frame' does not limit physical nor visual accessibility. The entrance and its framed view is emphasised in contrast to the building heights on either side of it. Entrance to the building is in line with the north-south visual axis while movement between destinations within the building is perpendicular to it.

Positions for Pause

The objective to expose movement within the building informed a strategy to determine the location of 'positions of pause' within the building. A pre-cast concrete balustrade indicates such positions. In each case, they allow the user to focus his attention on the immediate context. The most prominent 'pausing position' is the extended landing of the main staircase on the first floor. It is from this viewing balcony that the user is able to observe activities from the proposed public square located directly behind the synagogue right through to those on Paul Kruger Street.

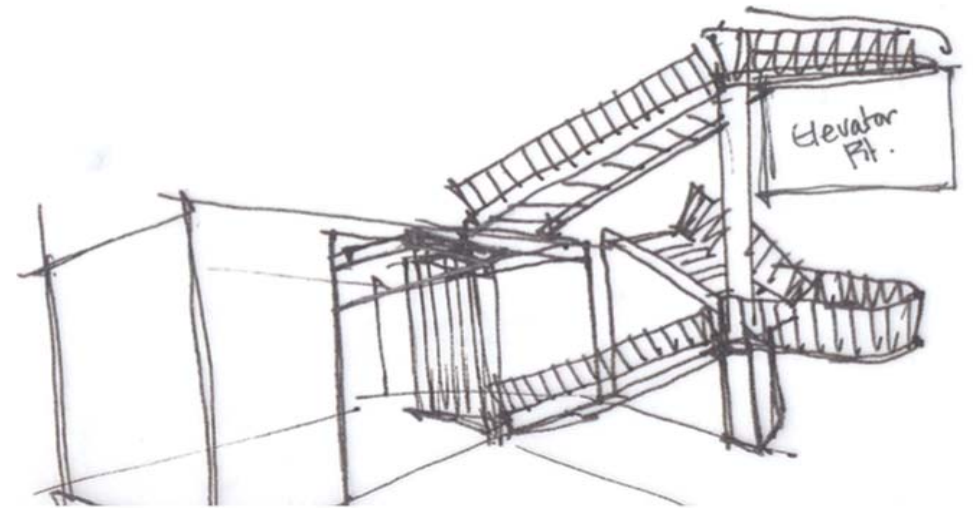


Figure 12.02 Sketch of Main Staircase and Viewing Balcony

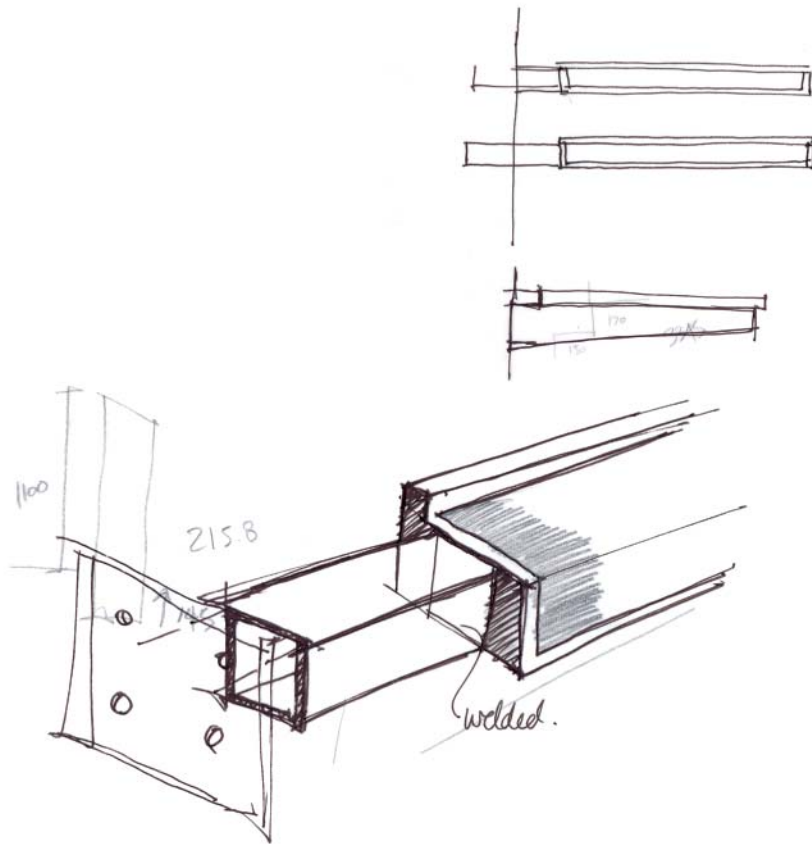


Figure 12.03

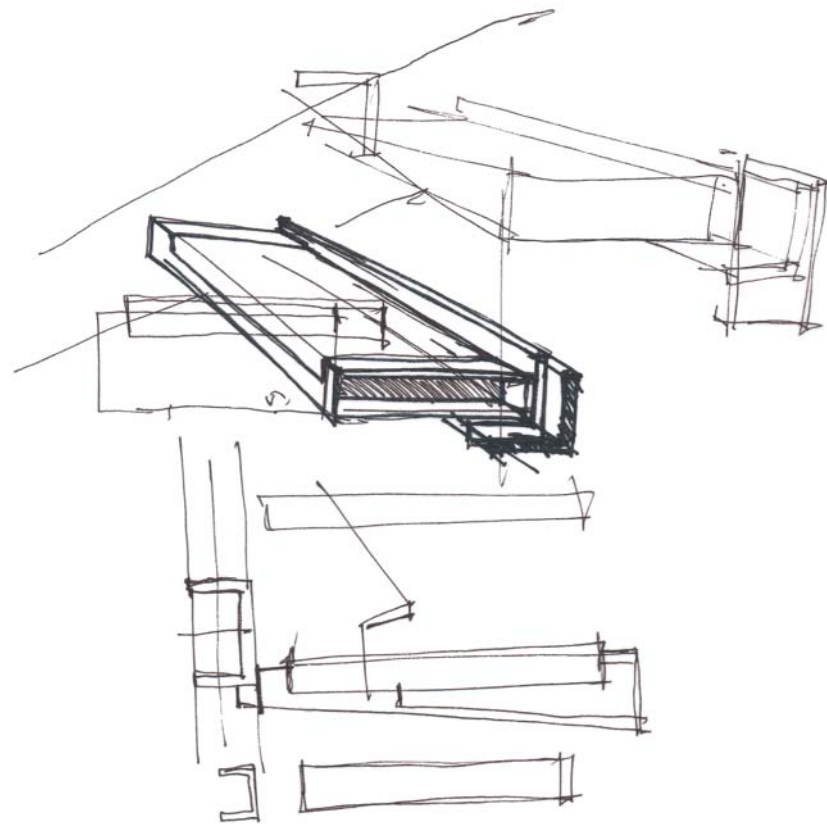


Figure 12.04

Balustrade

An important consideration was to accommodate a continuous handrail on all circulation routes in order to ensure the user's sense of safety on the open and exposed circulation bridges. For this reason the continuous stainless steel handrail is integral to the solid concrete balustrade. Together with a change of floor finish and colour of the solid balustrade, each floor of the building can be identified. This aids the vertical orientation within the building.

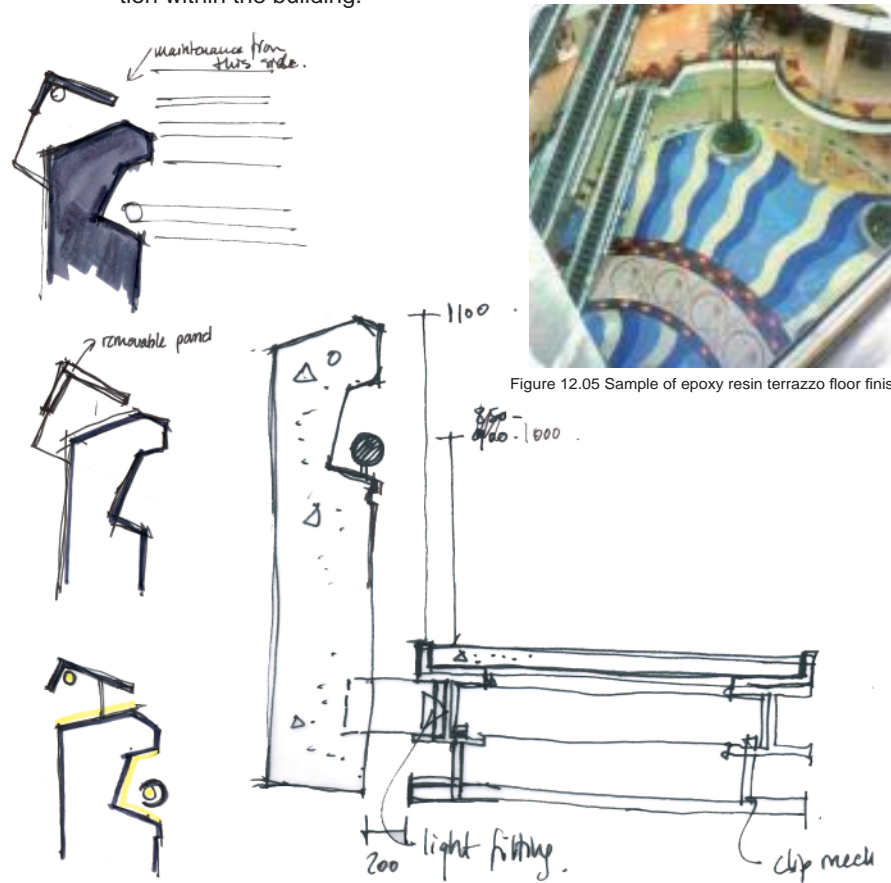


Figure 12.05 Sample of epoxy resin terrazzo floor finish

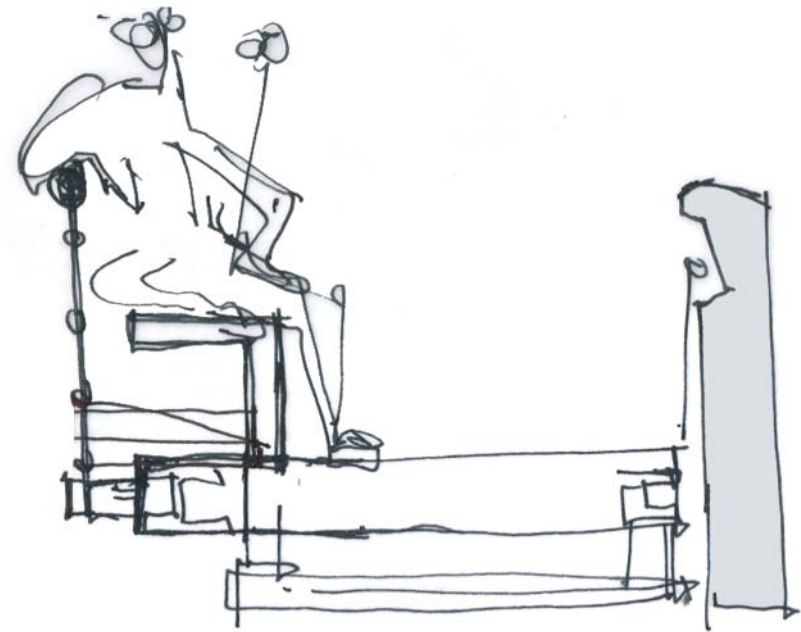


Figure 12.07 Sketch of 'Position of Pause'

Figure 12.06 Concept development of balustrade detail with tactile display panel (left)

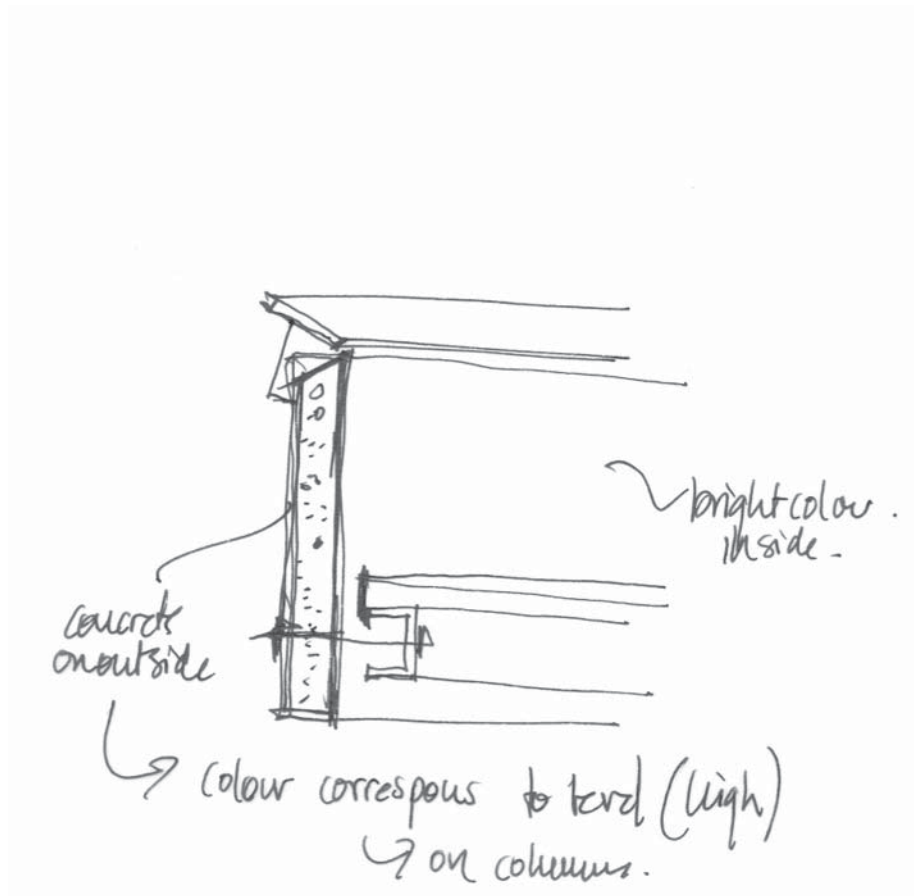


Figure 12.08 Balustrade detail

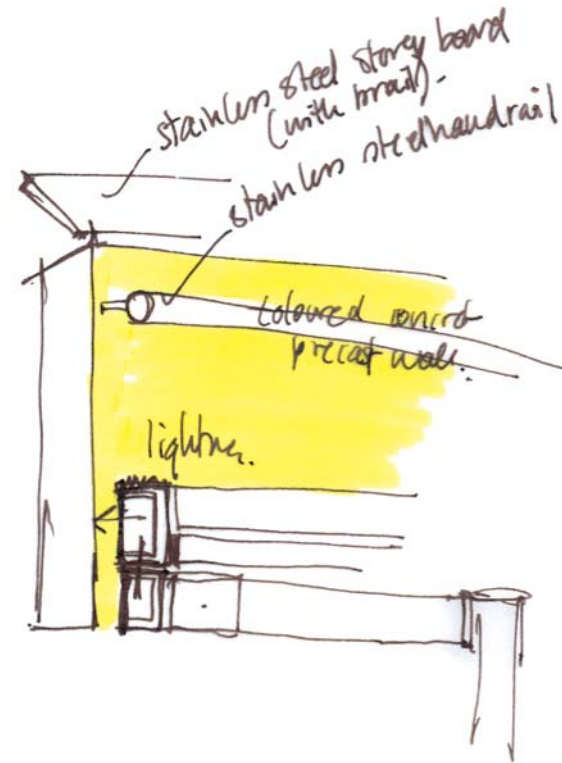
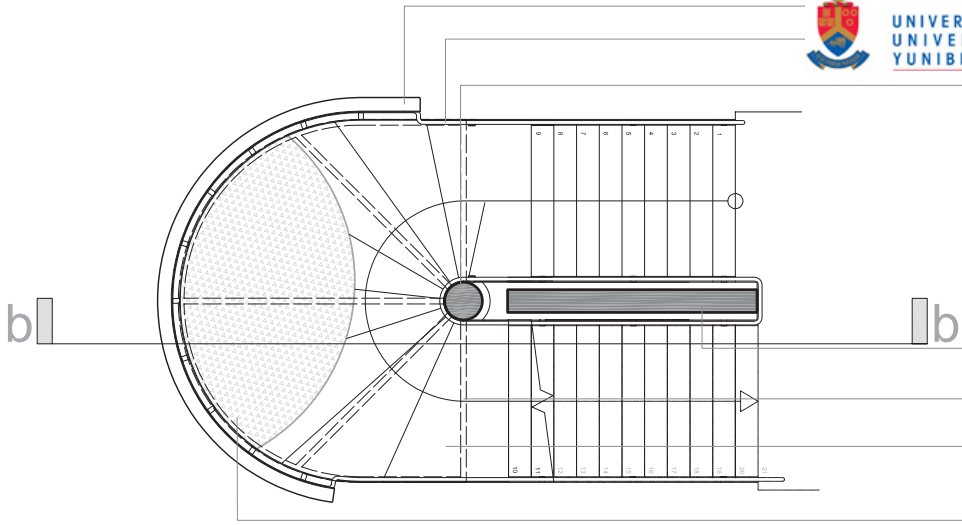


Figure 12.09 Colour usage on pre-cast concrete balustrade

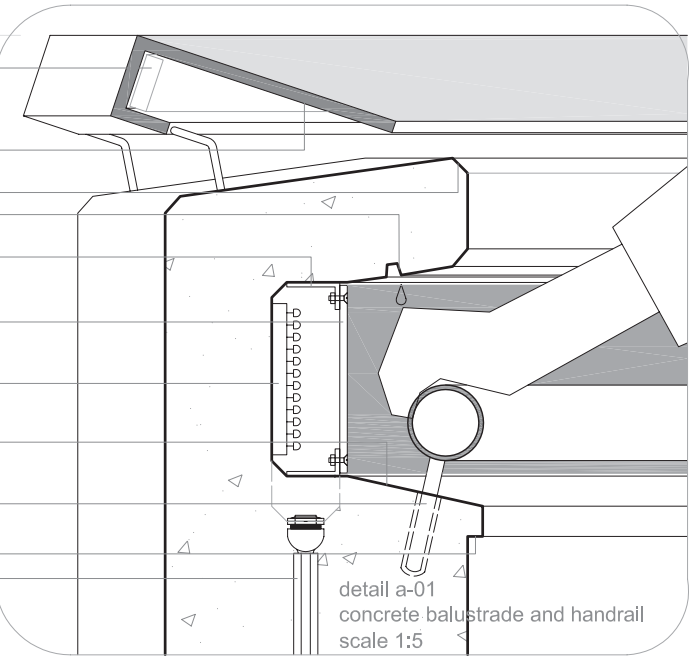


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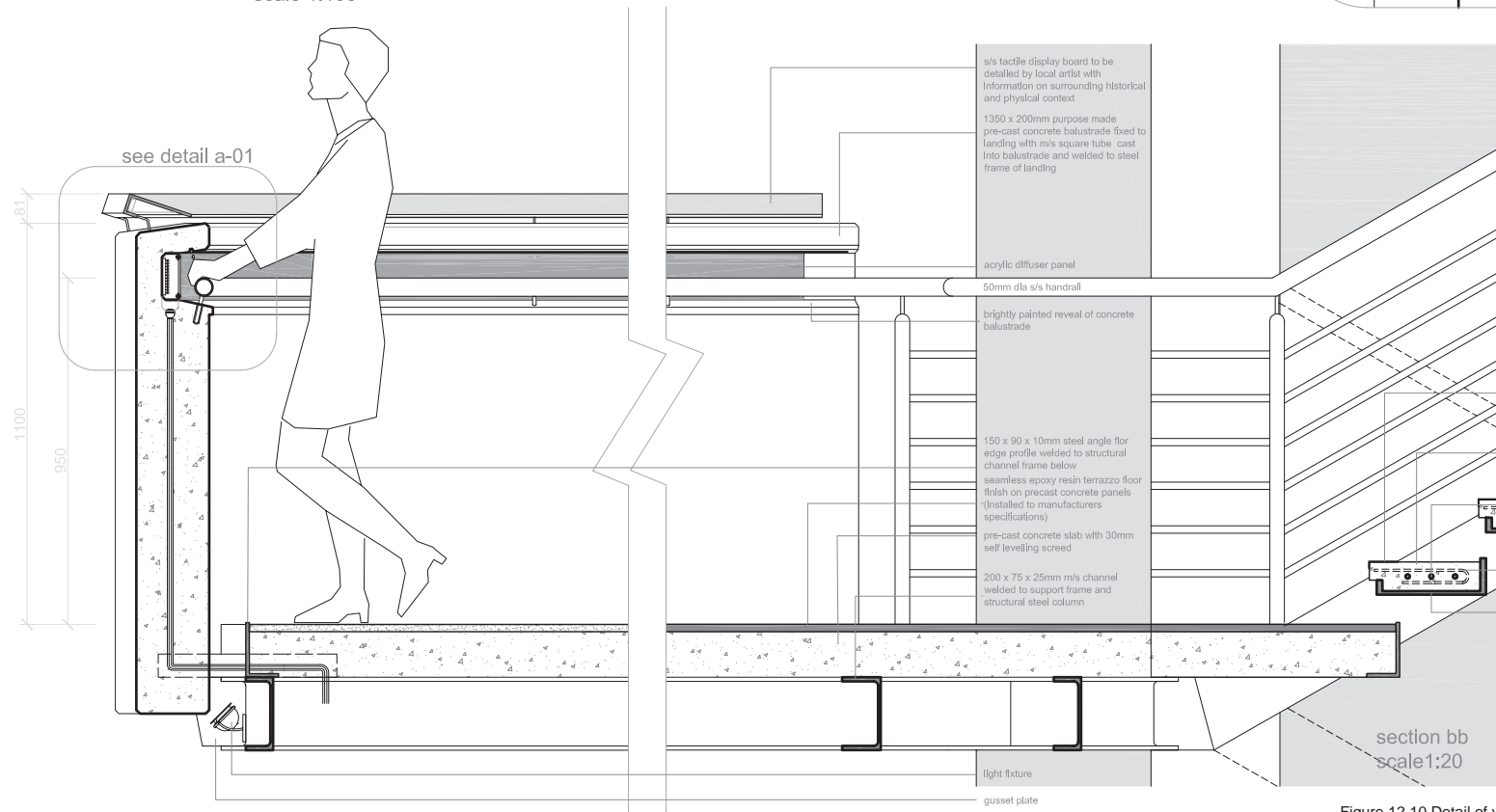


plan of viewing balcony of main staircase
scale 1:100

- hollow steel section supporting staircase landings
- 3300 x 300 in-situ rc concrete staircase wall
- 200 x 75 x 25mm m/s channel welded to support frame and structural steel column
- pre-cast concrete slab with 30mm sandblasted concrete screed
- seamless epoxy resin terrazzo floor finish (to manufacturer's specifications)
- 800 x 10 x 3mm light flex LED slide strip fixed to s/s tactile display board using polyurethane epoxy
- custom shaped and etched s/s tactile display board fixed to concrete balustrade with a chemical bolt
- chamfered edge
- drip
- 18 x 35 x 3 mm angle profile fixed to underside of pre-cast concrete balustrade with polyurethane epoxy
- 600 x 125 x 5mm acrylic diffuser panel fixed to angle profile with s/s countersunk screw
- 8400 x 10 x 3mm light flex LED slide strip fixed to concrete balustrade using polyurethane epoxy
- brightly painted surface (varying shades of red with increasing height)
- 50mm dia x 3mm s/s handrail fixed to 10mm dia rod fixed to concrete balustrade with a chemical bolt
- 20mm overhang
- 20mm pvc electrical conduit cast in each panel



detail a-01
concrete balustrade and handrail
scale 1:5



section bb
scale 1:20

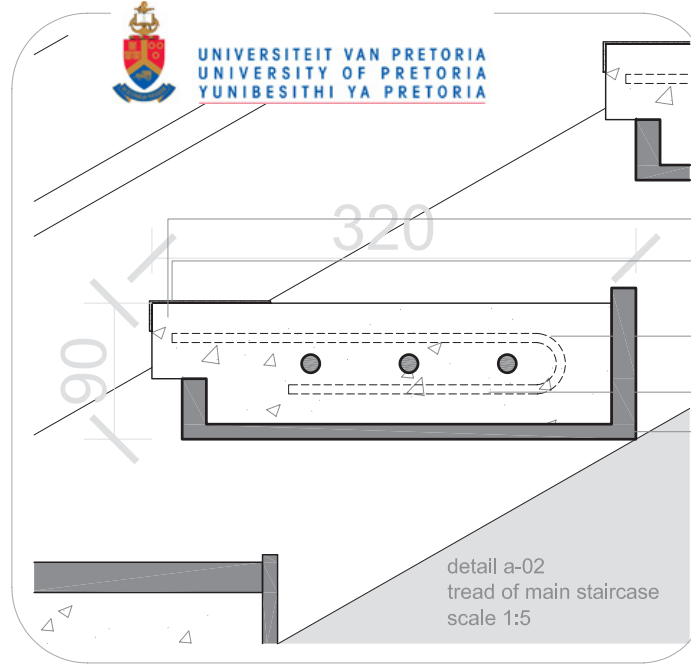
detail a
detail of viewing balcony of main staircase

- s/s tactile display board to be detailed by local artist with information on surrounding historical and physical context
- 1350 x 200mm purpose made pre-cast concrete balustrade fixed to landing with m/s square tube cast into balustrade and welded to steel frame of landing
- acrylic diffuser panel
- 50mm dia s/s handrail
- brightly painted reveal of concrete balustrade
- 150 x 90 x 10mm steel angle floor edge profile welded to structural channel frame below
- seamless epoxy resin terrazzo floor finish on precast concrete panels (installed to manufacturer's specifications)
- pre-cast concrete slab with 30mm self levelling screed
- 200 x 75 x 25mm m/s channel welded to support frame and structural steel column
- light fixture
- gusset plate
- 80 x 20 x 1900mm s/s anti-slip safety edge step cover fixed to concrete with 30mm s/s plated screws (to manufacturer's specifications)
- pre-cast concrete tread with 12mm dia reinforcing rods
- 12mm dia steel reinforcing rods cast into pre-cast tread to protrude at either end of tread
- 12mm steel reinforcing cage with 20mm cover to engineering specifications
- 300 x 100 x 46 channel section cut to size and welded to steel stringer

Figure 12.10 Detail of viewing balcony of main staircase

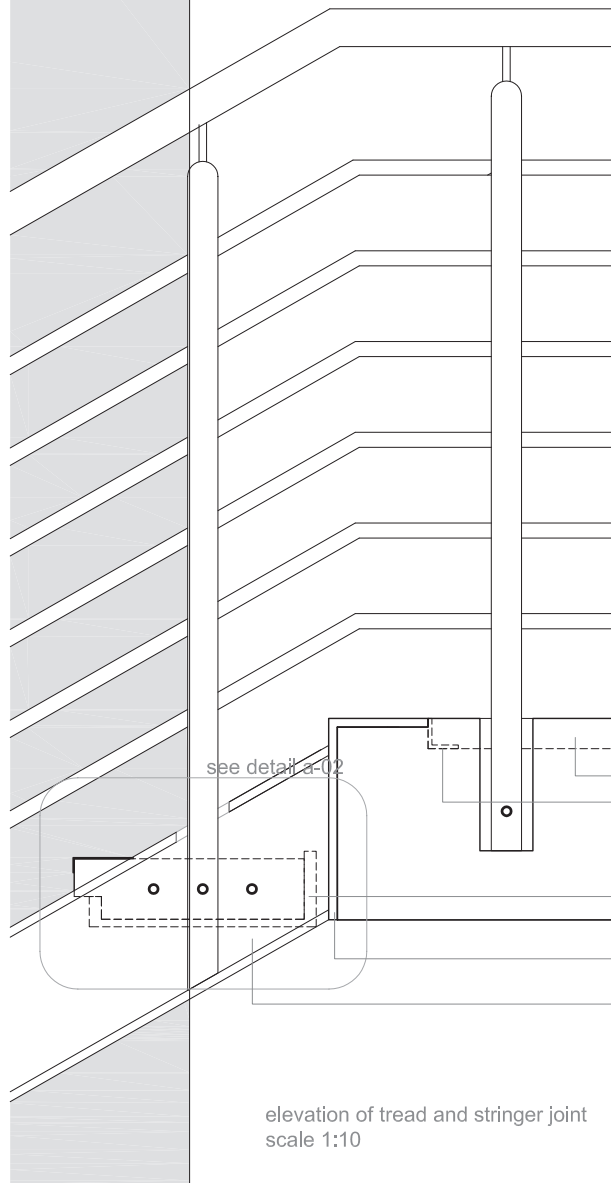


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- 20mm nosing
- 80 x 20 x 1900mm s/s anti-slip safety edge step cover fixed to concrete with 30mm zinc plated s/s screws (to manufacturer's detail)
- pre-cast concrete tread with 12mm dia reinforcing rods @ 65mm centres
- 12mm dia steel reinforcing cage to engineers specifications
- 300 x 100 x 46 channel section cut to size and welded to m/s stringer

detail a-02
tread of main staircase
scale 1:5

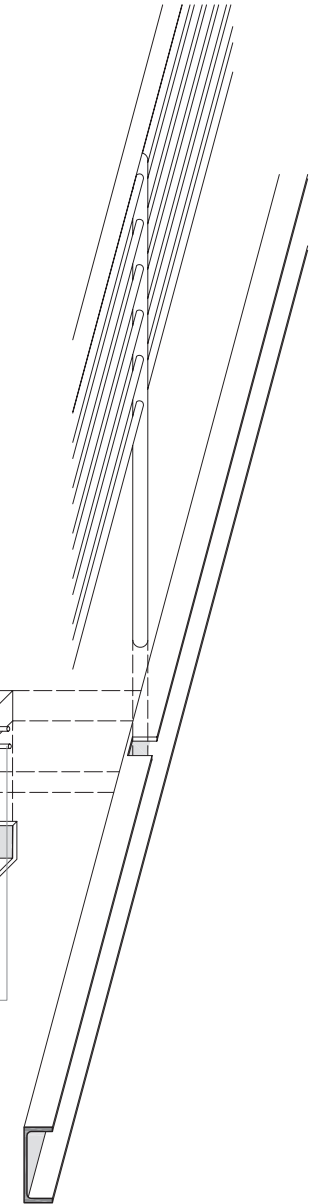


elevation of tread and stringer joint
scale 1:10



exploded view of detail a-01
scale 1:20

protruding reinforcing rods fillet welded to channel and m/s balustrade post with 13mm dia holes drilled for protruding reinforcing rods



detail a
tread detail



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Void

The position of a large multiple-volume void in the northern portion of the building¹ was determined by means of a solar investigation to allow direct natural light to penetrate through to the courtyard located on the southern side of the building. The void created the opportunity to group and expose activities within the building.

Private balconies were extended into the void while 'positions for pause' were located on the circulation routes in line with the void. This position is indicated by a change in floor finish, a solid balustrade and a concrete bench. It allows the user to observe activities both north and south of the building. On a pedestrian level the void as perceived from Struben Street, alludes to something significant located south of the building.

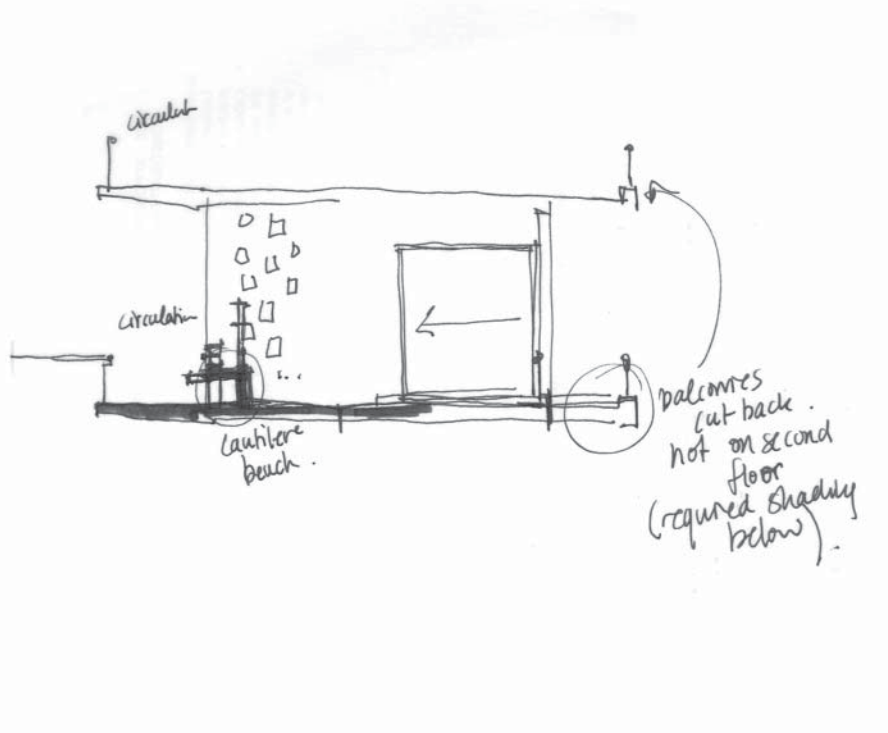


Figure 12.12 Sections through void

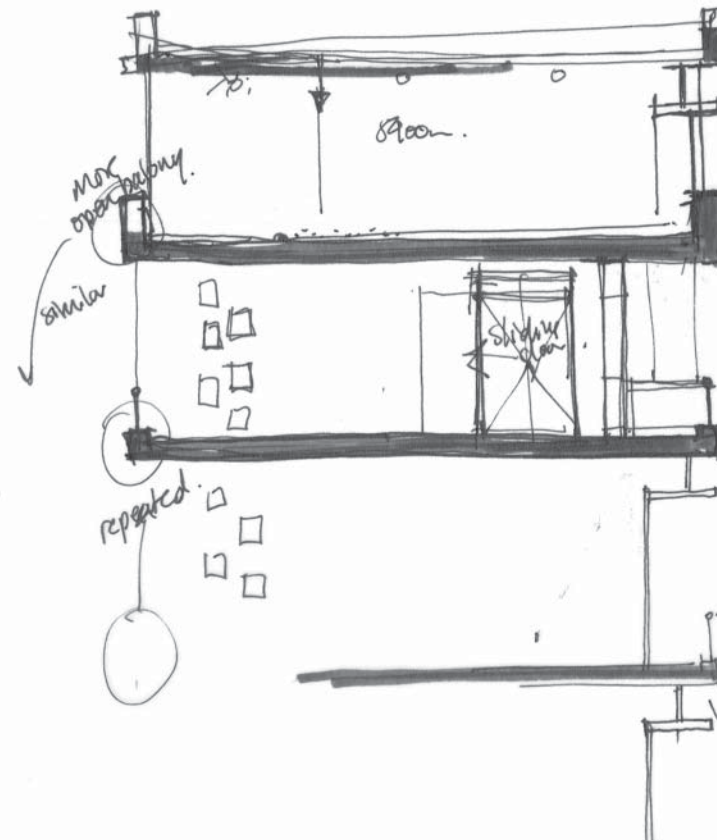


Figure 12.13 Section through void

1. refer to page 94 for information on position of void in the northern facade of the building

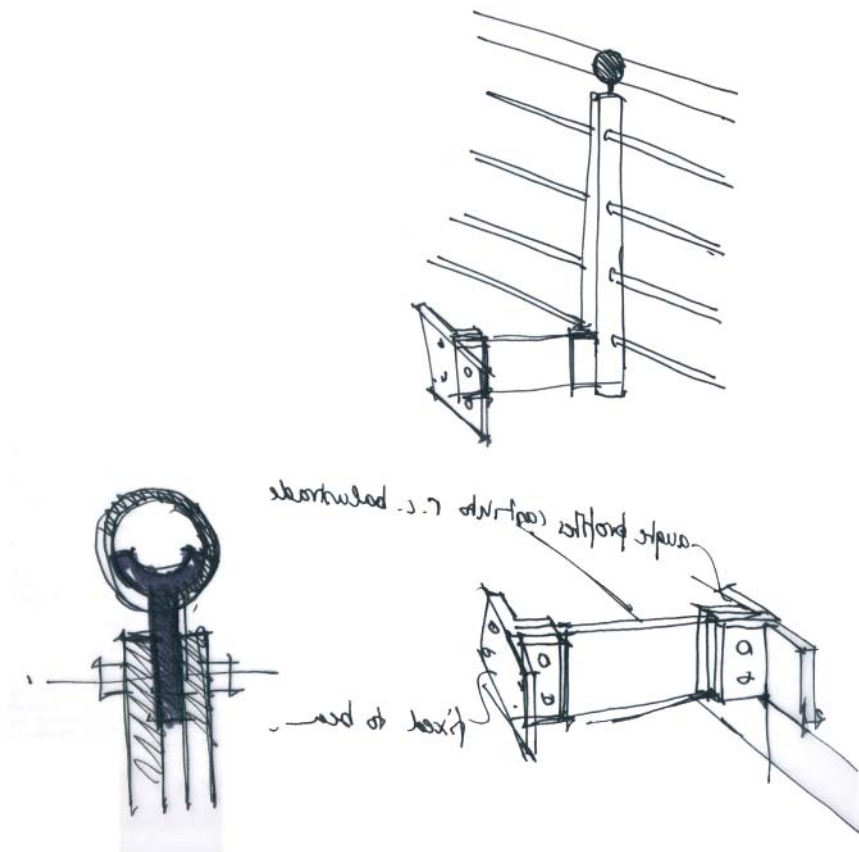


Figure 12.14

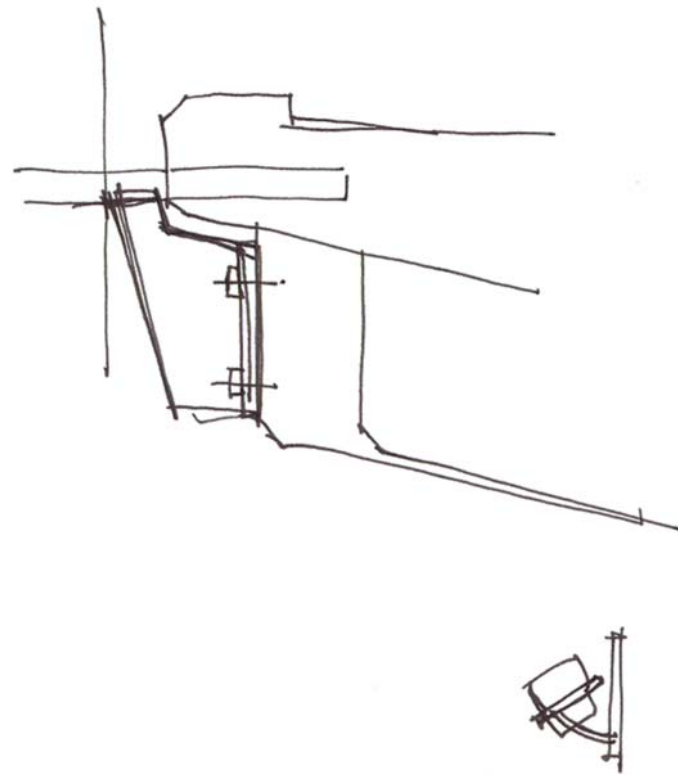


Figure 12.15

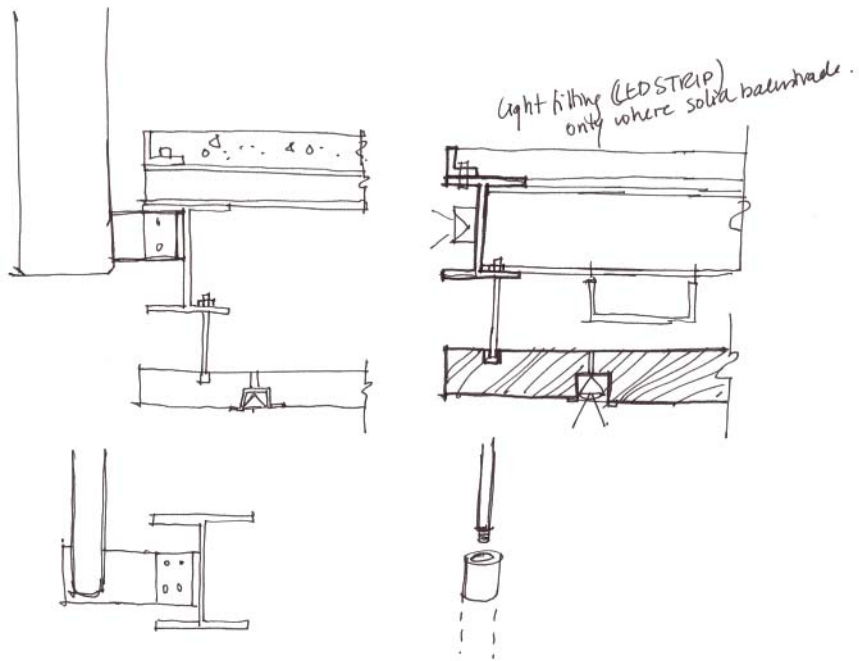


Figure 12.16

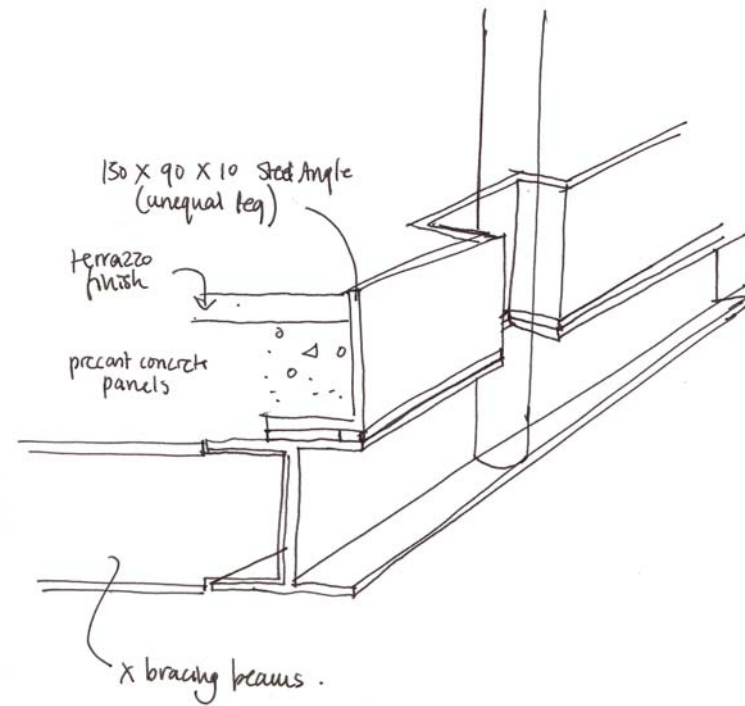


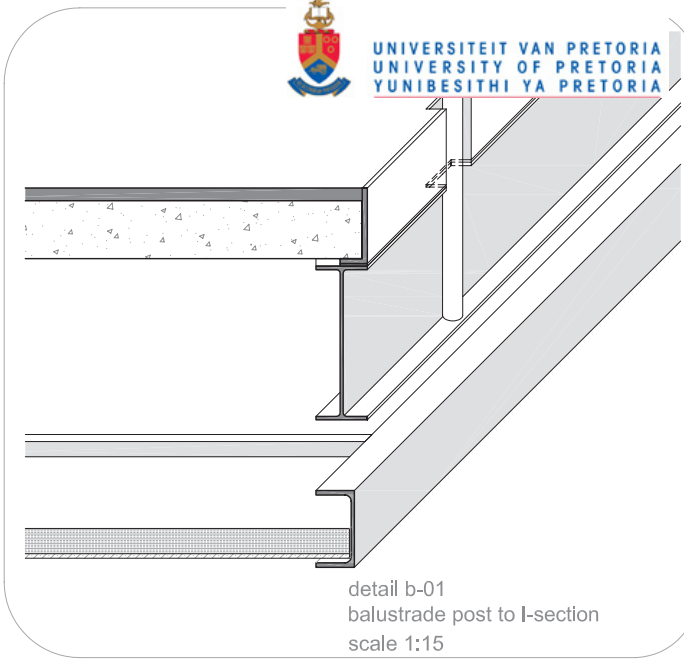
Figure 12.17 Detail sketch of base of baulstrade



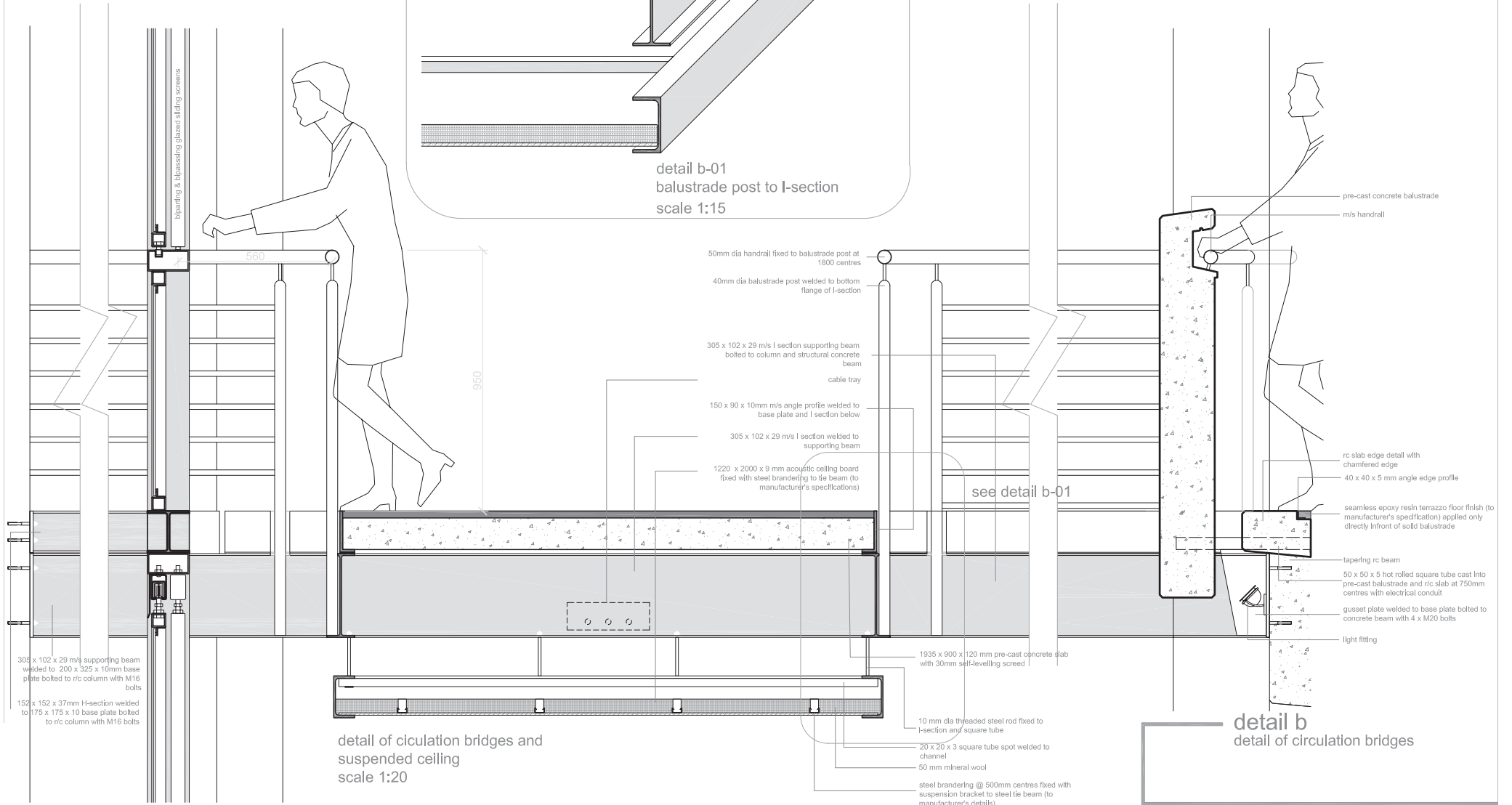
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pre-cast concrete balustrade



detail b-01
balustrade post to I-section
scale 1:15



305 x 102 x 29 m/s supporting beam welded to 200 x 325 x 10mm base plate bolted to r/c column with M16 bolts
152 x 152 x 37mm H-section welded to 175 x 175 x 10 base plate bolted to r/c column with M16 bolts

50mm dia handrail fixed to balustrade post at 1800 centres
40mm dia balustrade post welded to bottom flange of I-section
305 x 102 x 29 m/s I section supporting beam bolted to column and structural concrete beam
cable tray
150 x 90 x 10mm m/s angle profile welded to base plate and I section below
305 x 102 x 29 m/s I section welded to supporting beam
1220 x 2000 x 9 mm acoustic ceiling board fixed with steel bracing to tie beam (to manufacturer's specifications)

see detail b-01

pre-cast concrete balustrade
m/s handrail

rc slab edge detail with chamfered edge
40 x 40 x 5 mm angle edge profile
seamless epoxy resin terrazzo floor finish (to manufacturer's specifications) applied only directly in front of solid balustrade

tapering rc beam
50 x 50 x 5 hot rolled square tube cast into pre-cast balustrade and r/c slab at 750mm centres with electrical conduit
gusset plate welded to base plate bolted to concrete beam with 4 x M20 bolts
light fitting

detail b
detail of circulation bridges

detail of circulation bridges and suspended ceiling
scale 1:20

1935 x 900 x 120 mm pre-cast concrete slab with 30mm self-levelling screed

10 mm dia threaded steel rod fixed to I-section and square tube
20 x 20 x 3 square tube spot welded to channel
50 mm mineral wool

steel bracing @ 500mm centres fixed with suspension bracket to steel tie beam (to manufacturer's details)

Figure 12.18 Detail of circulation bridges



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Roof

The light roof structure above the central atrium merely provides the minimal shelter for practical functionality. Louvered fins on both the northern and southern edges of the roof allow winter sunlight to penetrate deeper into the courtyard and atrium spaces below. In the same manner that the building responds to the historical context, it is important for the user to experience the diurnally changing climatic conditions as these too form

part of the surrounding context. The roof structure supported by the large concrete columns rises above the entire building. At no point does the glazed skin of the atrium touch the roof allowing for ample natural ventilation.

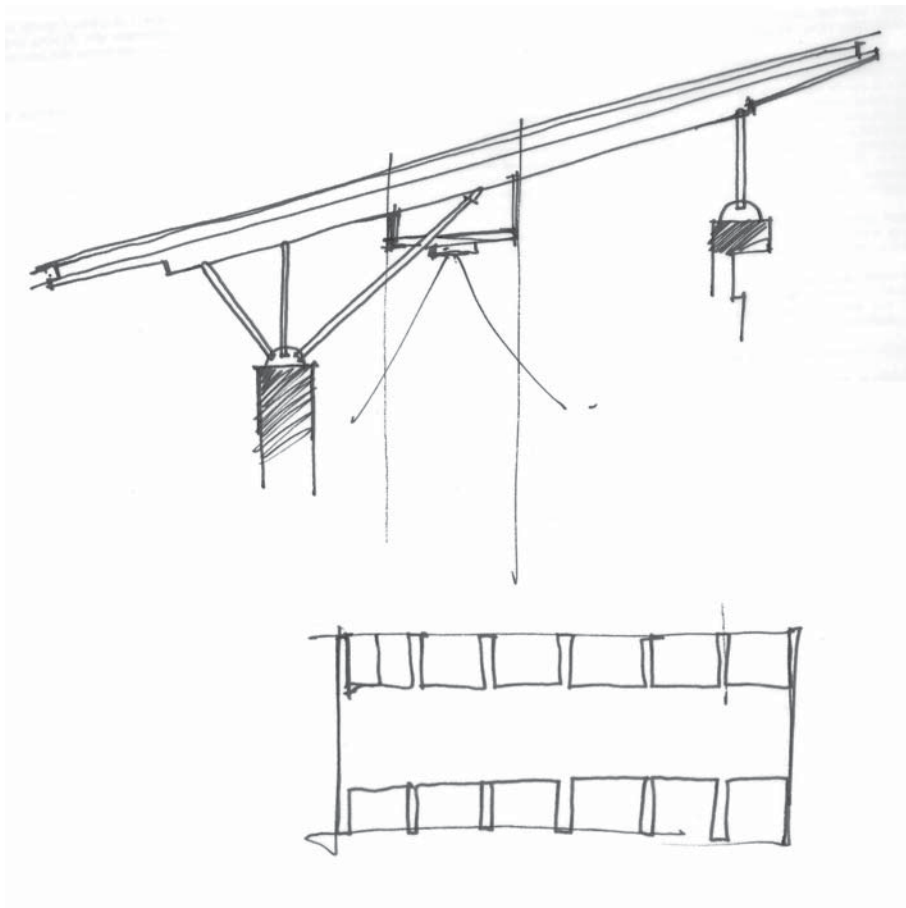


Figure 12.19



Figure 12.20

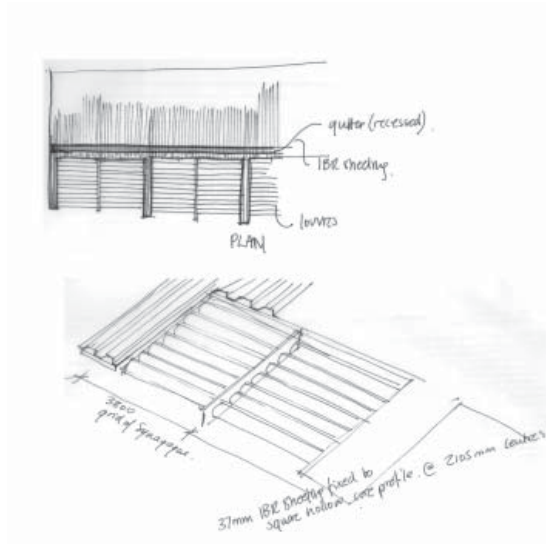


Figure 12.21 Sketch of shading fins

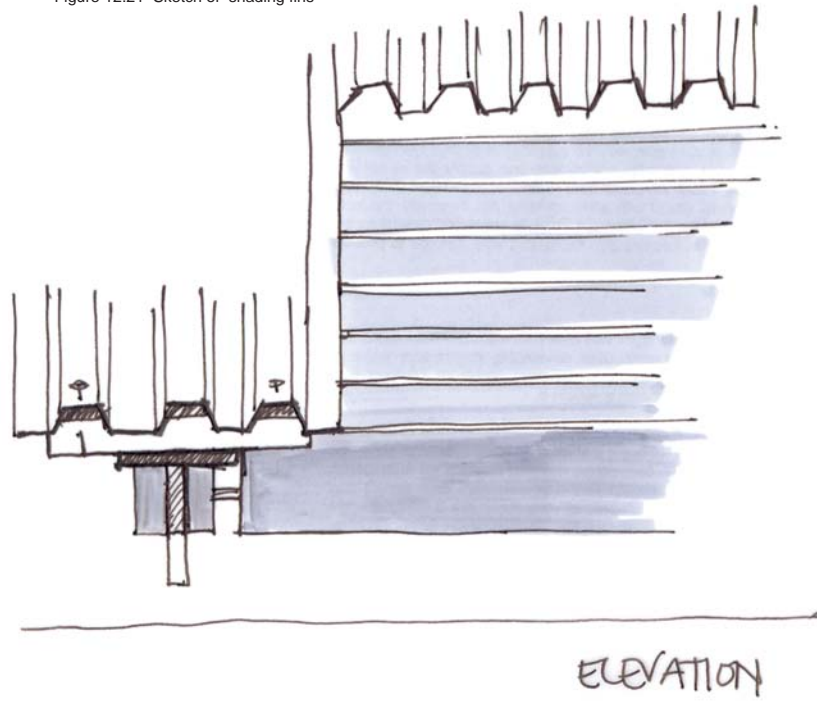


Figure 12.22

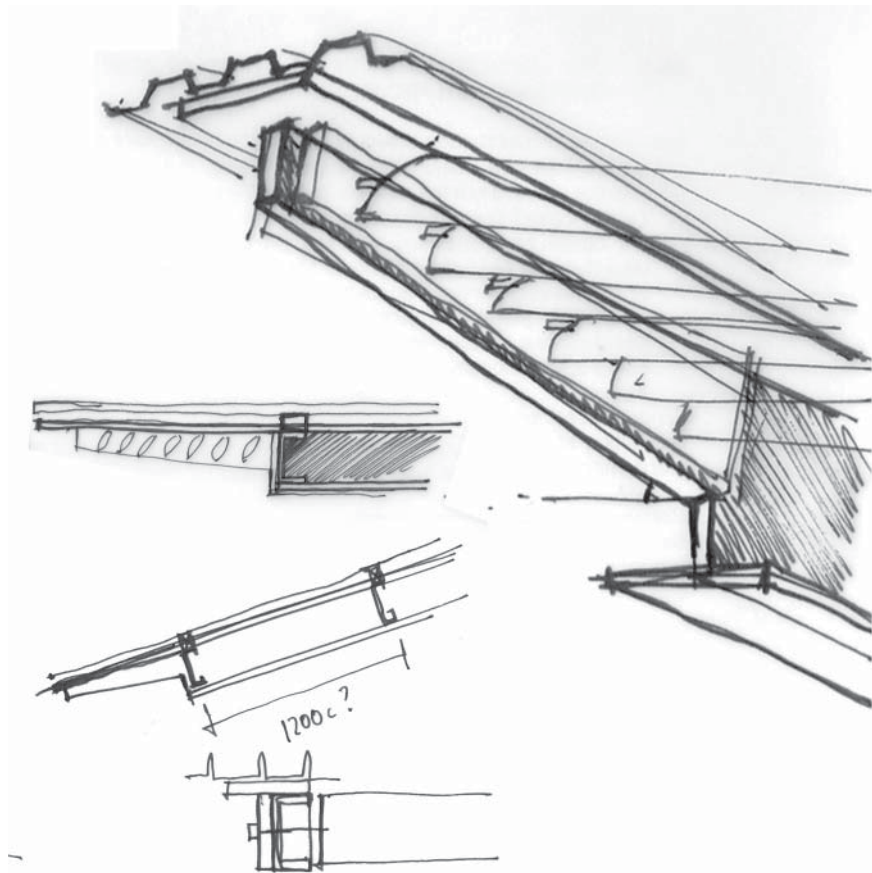


Figure 12.23

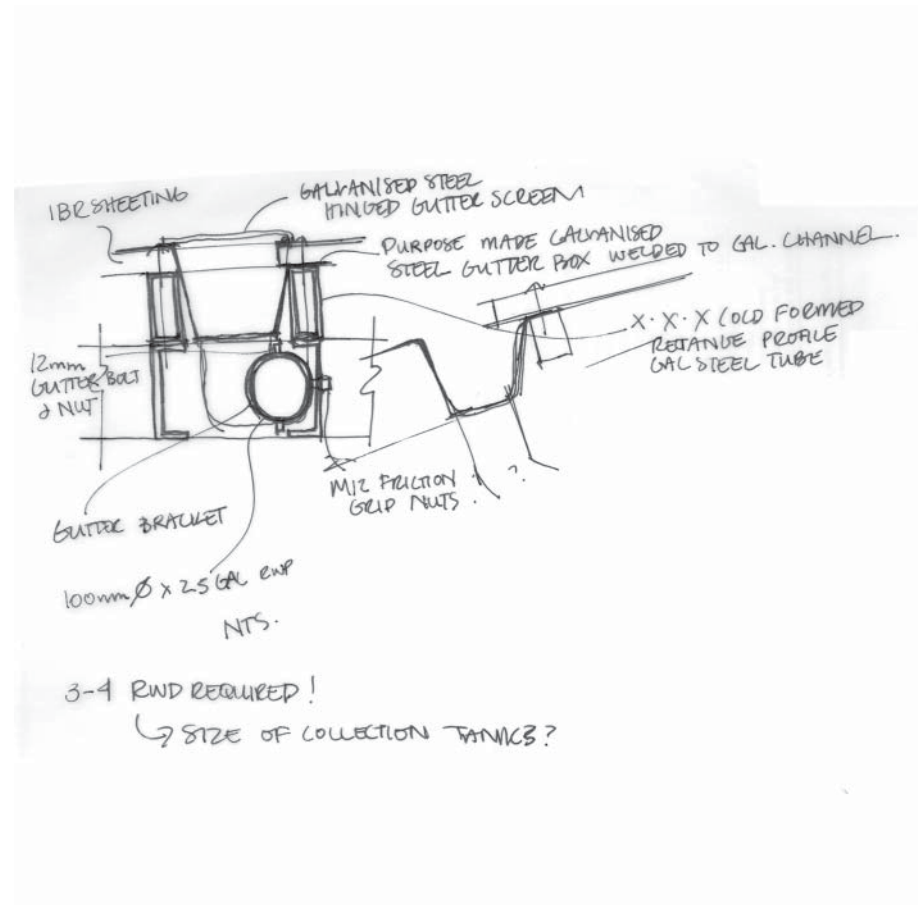
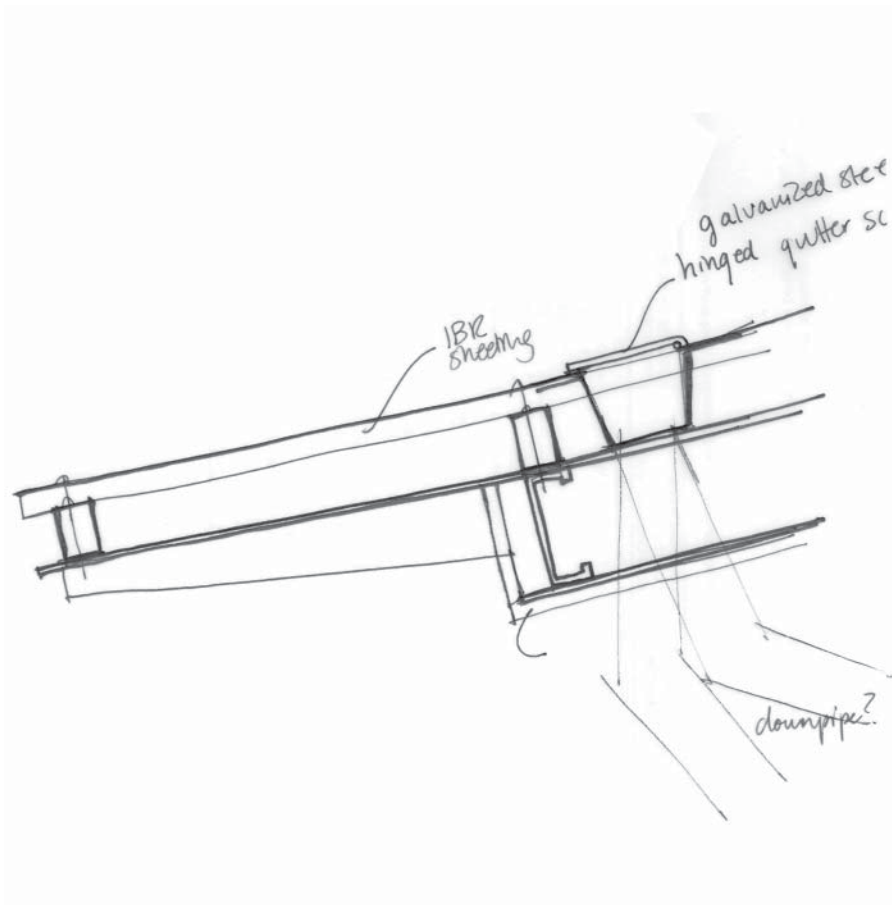


Figure 12.24

Figure 12.25 Gutter detail sketch



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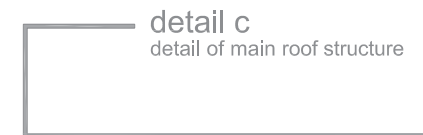
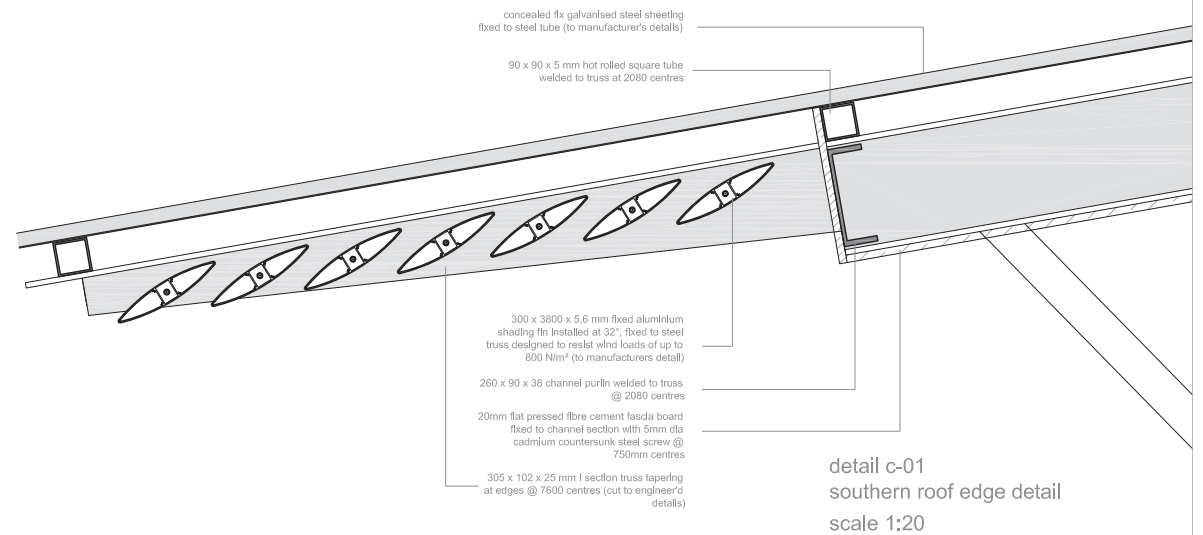
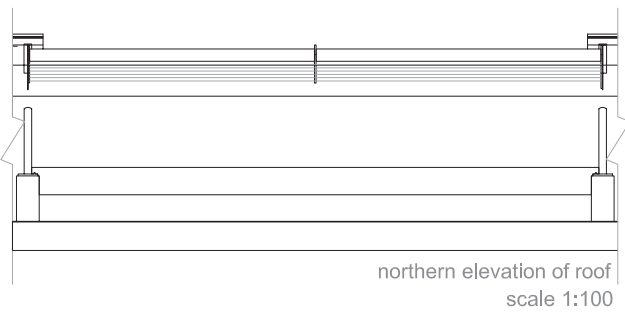
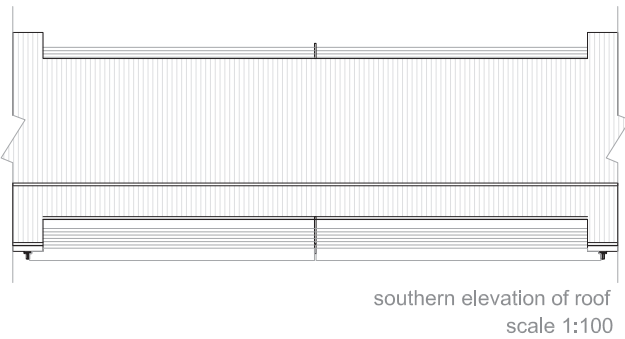
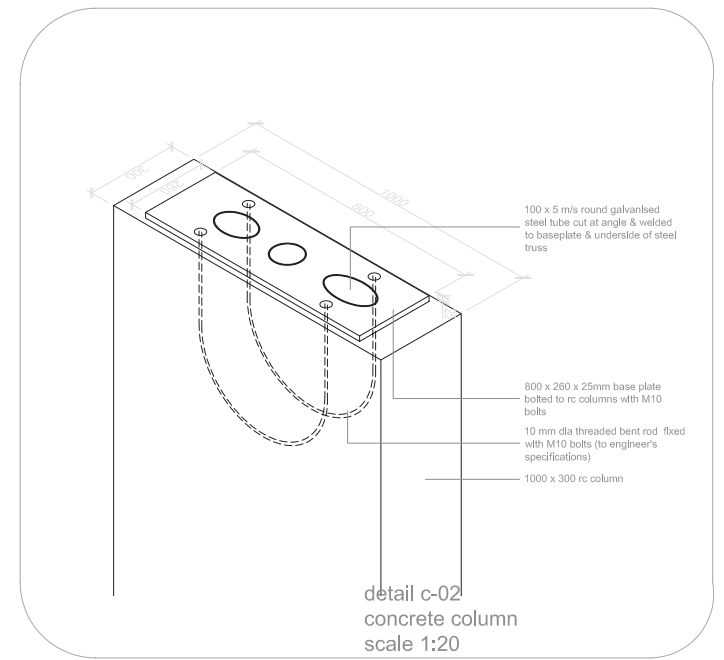
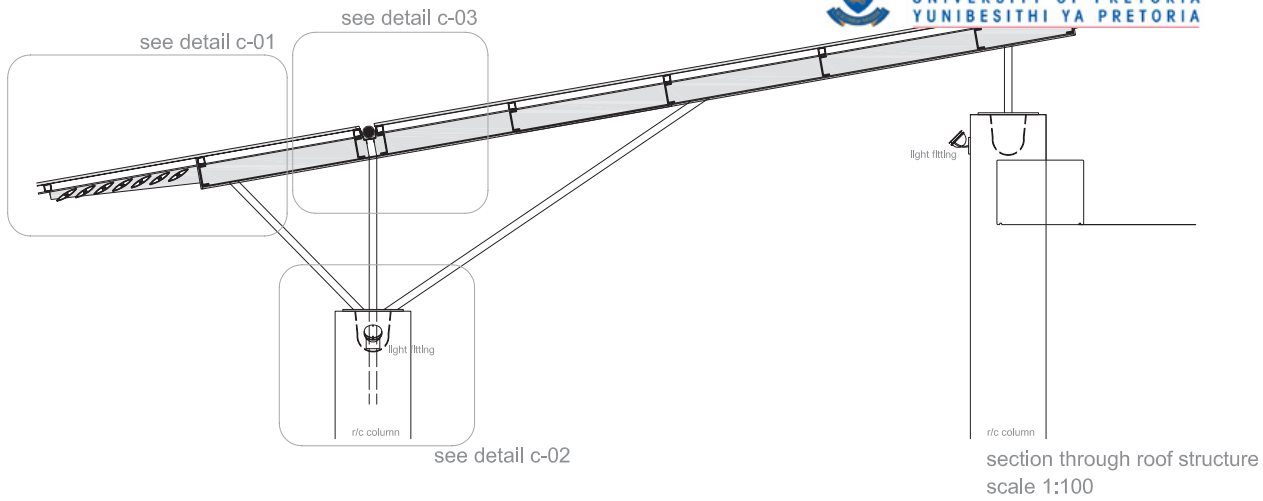
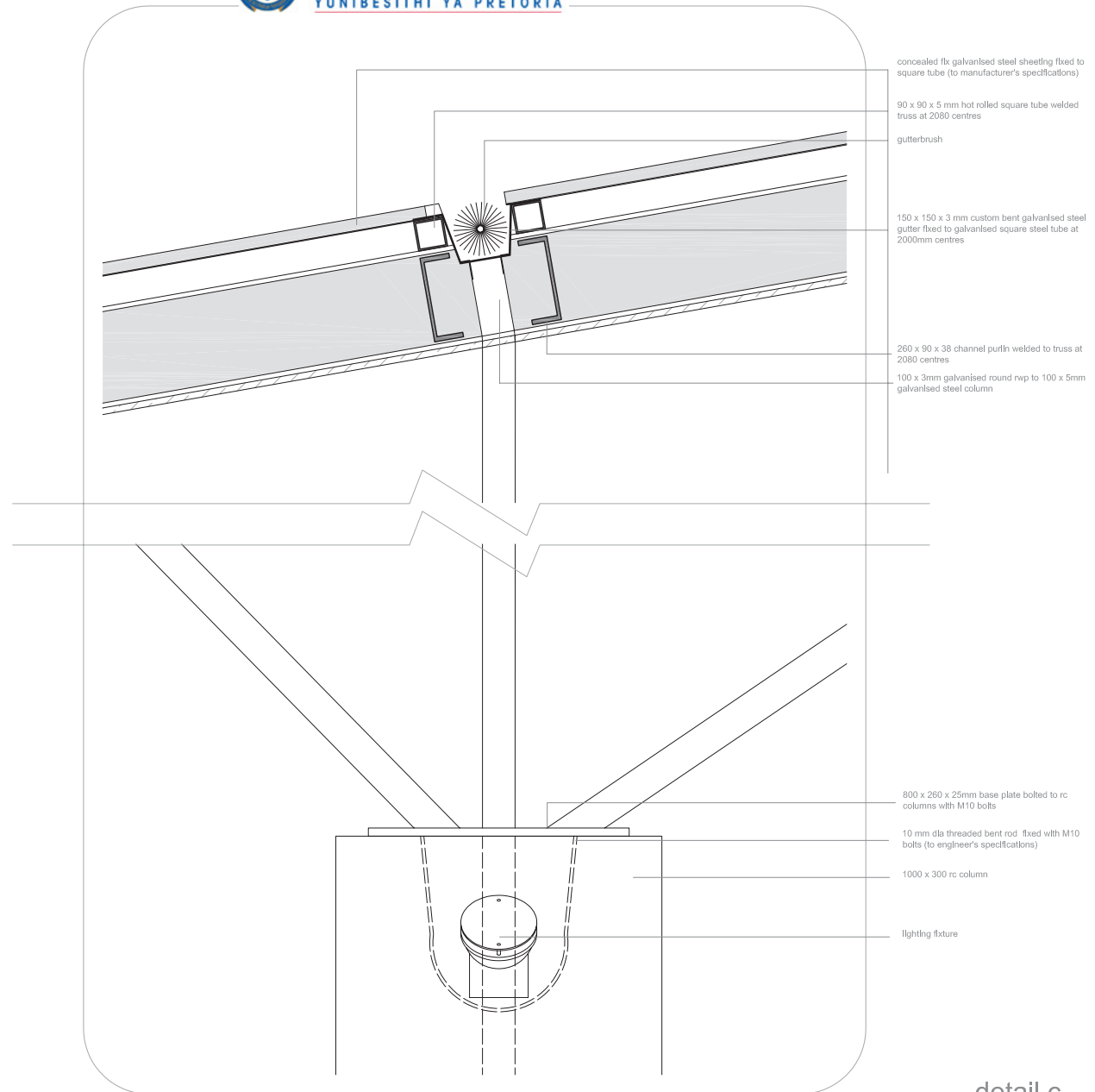


Figure 12.26 Detail of main roof structure



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detail c
gutter detail
scale 1:20

Figure 12.27 Detail of main roof structure



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Skin

The glazed skin of the atrium provides shelter from the prevailing south-western winter winds and rain. A steel frame box supported by the concrete columns protrudes into the atrium space and consists of a series of sliding screens that are within reach of the user from the main circulation bridge within the atrium. This allows the user to control the interior environment while the multiple sliding screens reflect the changing interior thermal environment.

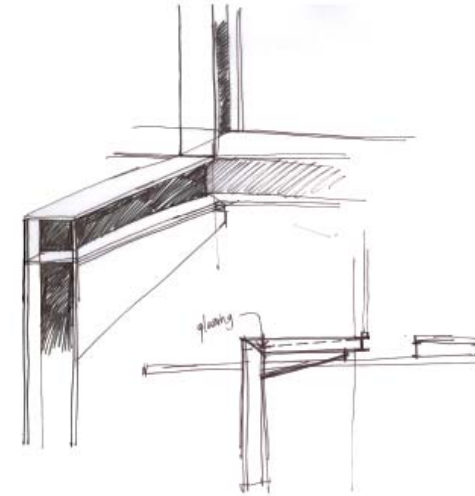


Figure 12.28 Sketch of structural support of protruding glazed sliding screen facade

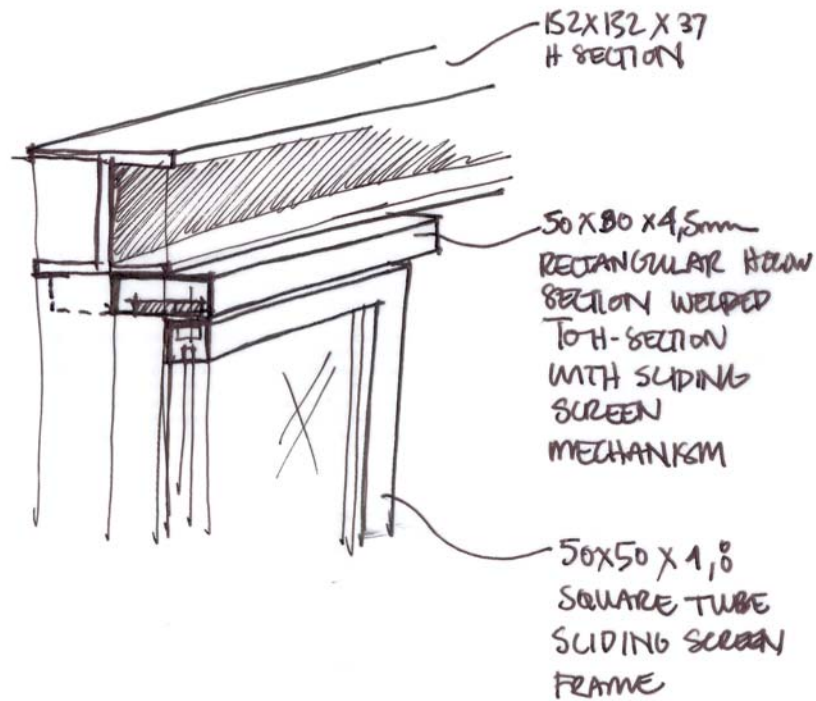


Figure 12.29 Sketch of sliding screen detail

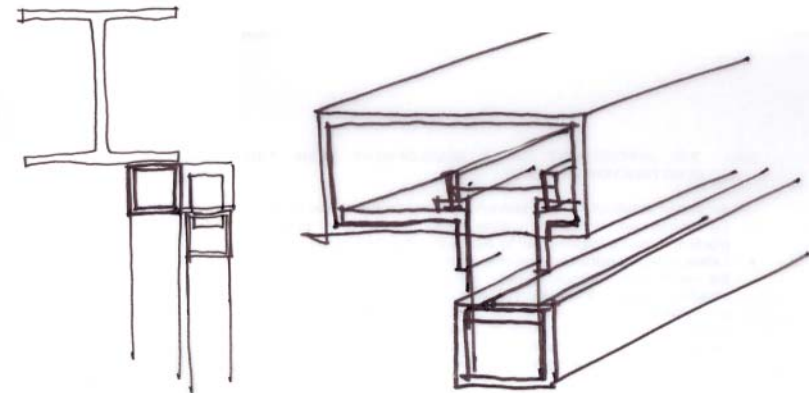
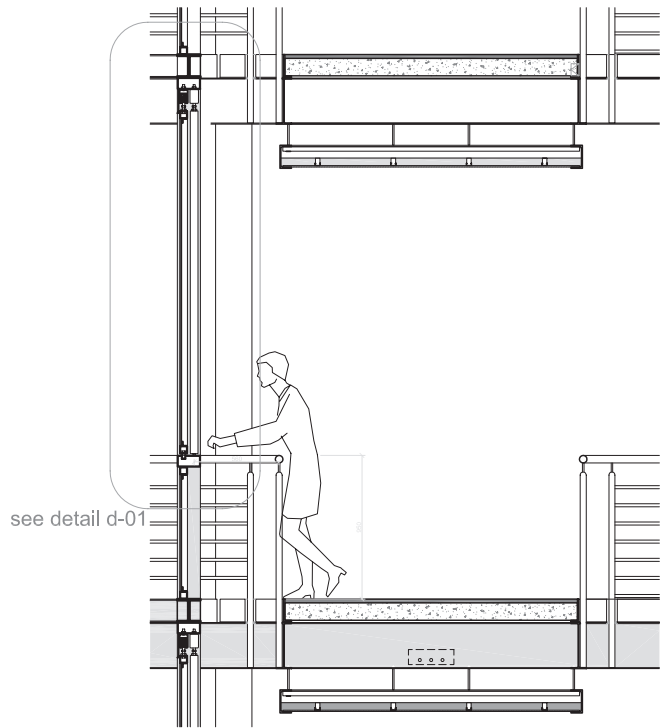


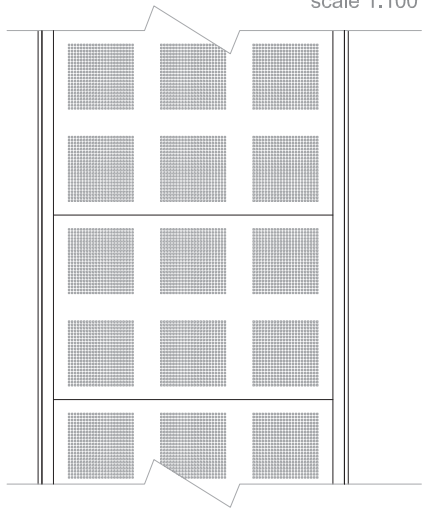
Figure 12.30 Sketch of sliding screen detail



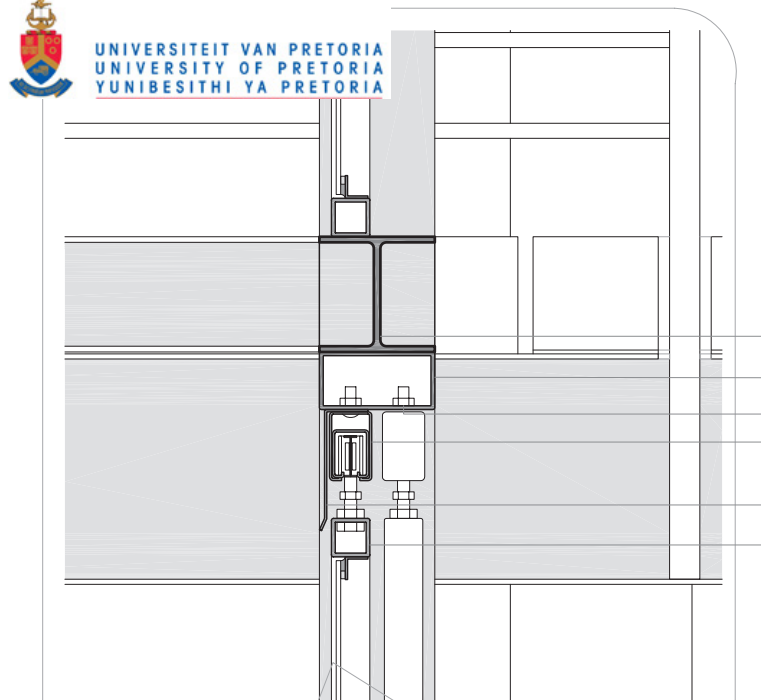
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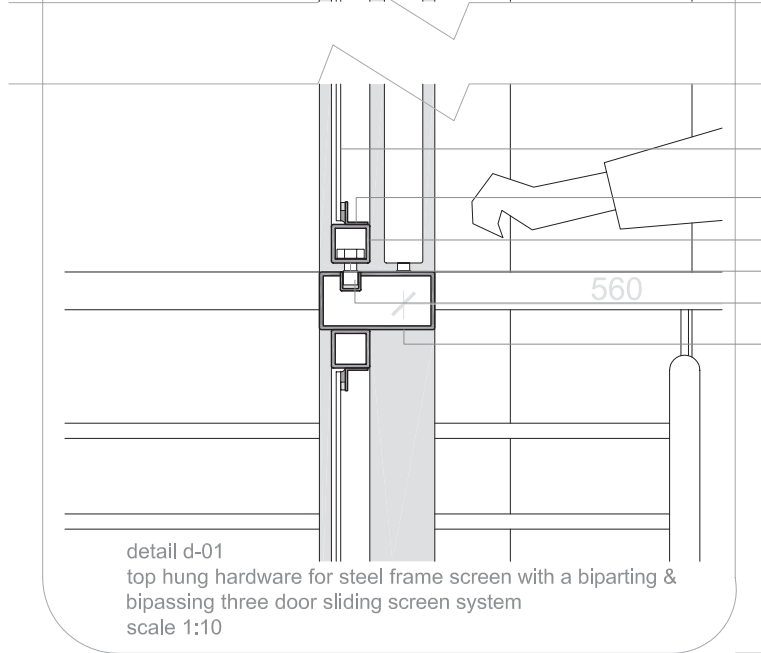
section through circulation bridge
and glazed sliding screen facade
of interior atrium
scale 1:100



plan view of suspended acoustic
ceiling boards
scale 1:100



- 152 x 152 x 37 mm H-section supporting structure
- 152 x 76 x 5mm hot rolled rectangular hollow tube welded to h-section
- 12mm dia drilled hole
- 48 x 63mm steel top track fixing bracket
- steel weather hood (to manufacturer's specification)
- 50 x 50 x 5mm hot rolled m/s square tube sliding screen frame



- 10mm laminated safety glass fixed to 25 x 25 x 3mm equal angle using double sided tape and structural silicone sealant
- 25 x 25 x 3mm m/s equal angle spot welded to square tube
- 50 x 50 x 5mm hot rolled m/s square tube sliding screen frame
- 17 mm dia drilled hole (to manufacturer's specifications)
- 48 x 25m guide with 25s channel (to manufacturer's specifications)
- 152 x 76 x 5mm hot rolled rectangular hollow tube welded to h-section

detail d-01
top hung hardware for steel frame screen with a biparting &
bipassing three door sliding screen system
scale 1:10

detail d
circulation bridge & glazed sliding
screen facade of interior atrium



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Threshold

The spaces within the building blur the line between what is considered interior and exterior space to exploit the ideal climatic conditions of the Highveld. A light-weight steel framed roof structure that extends from the interior atrium into the exterior public courtyard well beyond the structural columns of the building not only blurs this threshold but also suggests layers of progression. This is achieved by gradually increasing the opacity and leaf-patterning of the glazed roof structure above. This is further emphasised by the large deciduous Paperbark Thorn tree situated within the courtyard. During the day movement from exterior to interior space is a gradual progression from light to dark while at night this transition is reversed.

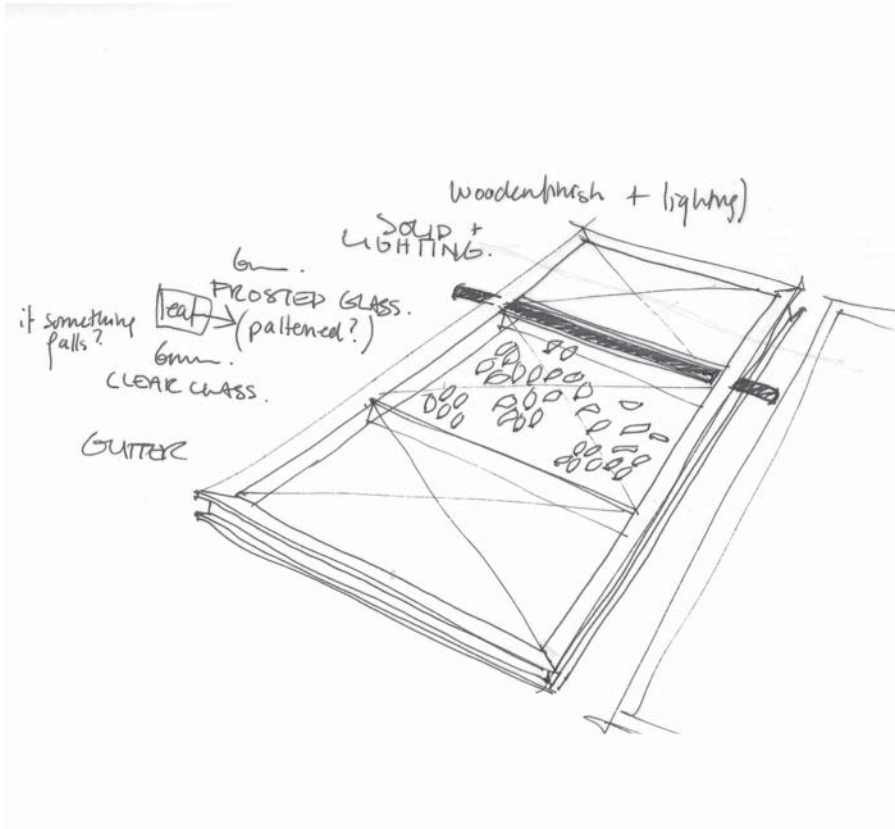


Figure 12.33 Sketch of glazed 'threshold' roof

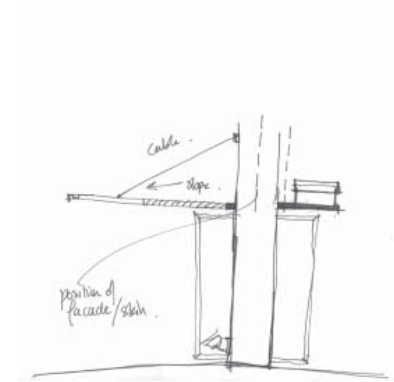


Figure 12.32 Sketch of glazed 'threshold' roof

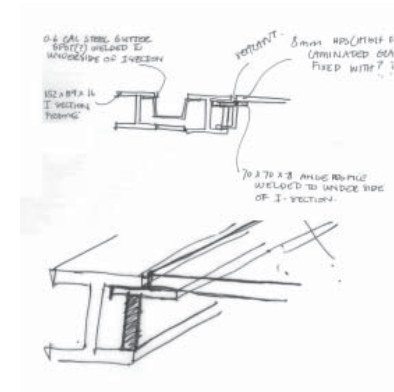


Figure 12.34 Detail exploration

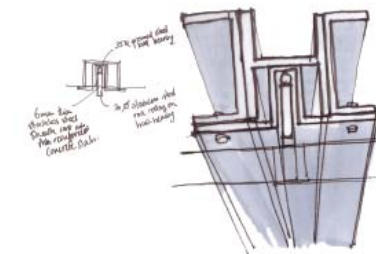
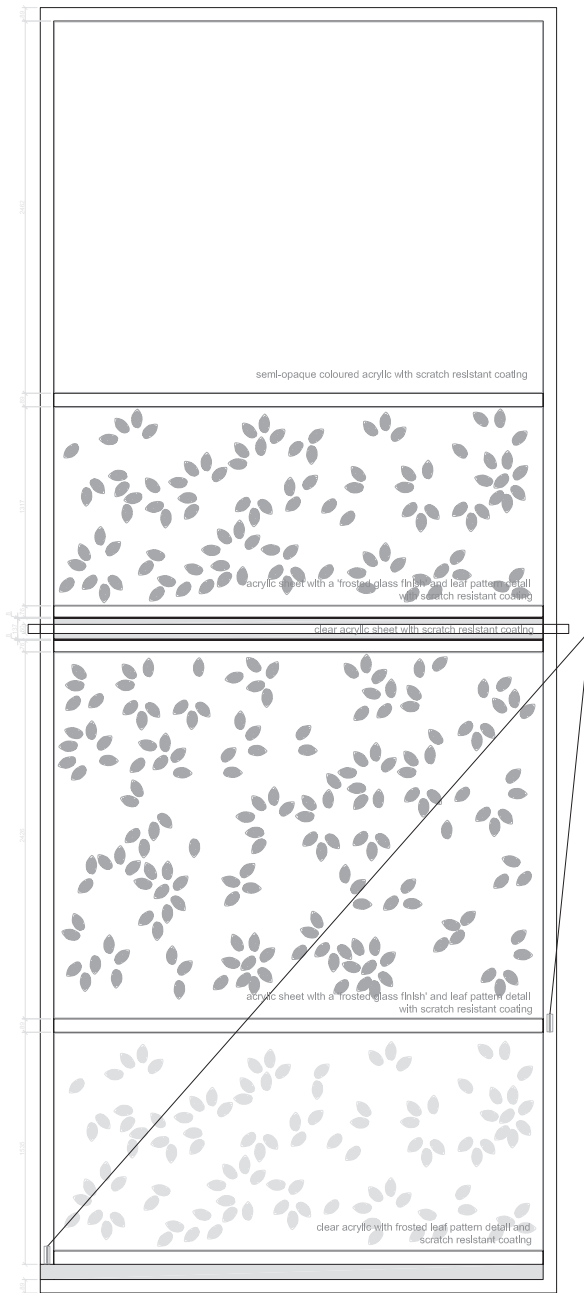


Figure 12.35 Detail exploration



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plan of threshold roof and leaf pattern detail
scale 1:50



elevation of threshold roof
scale 1:50

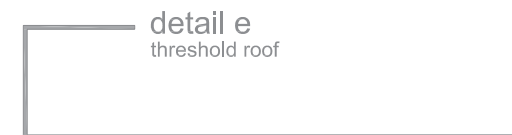
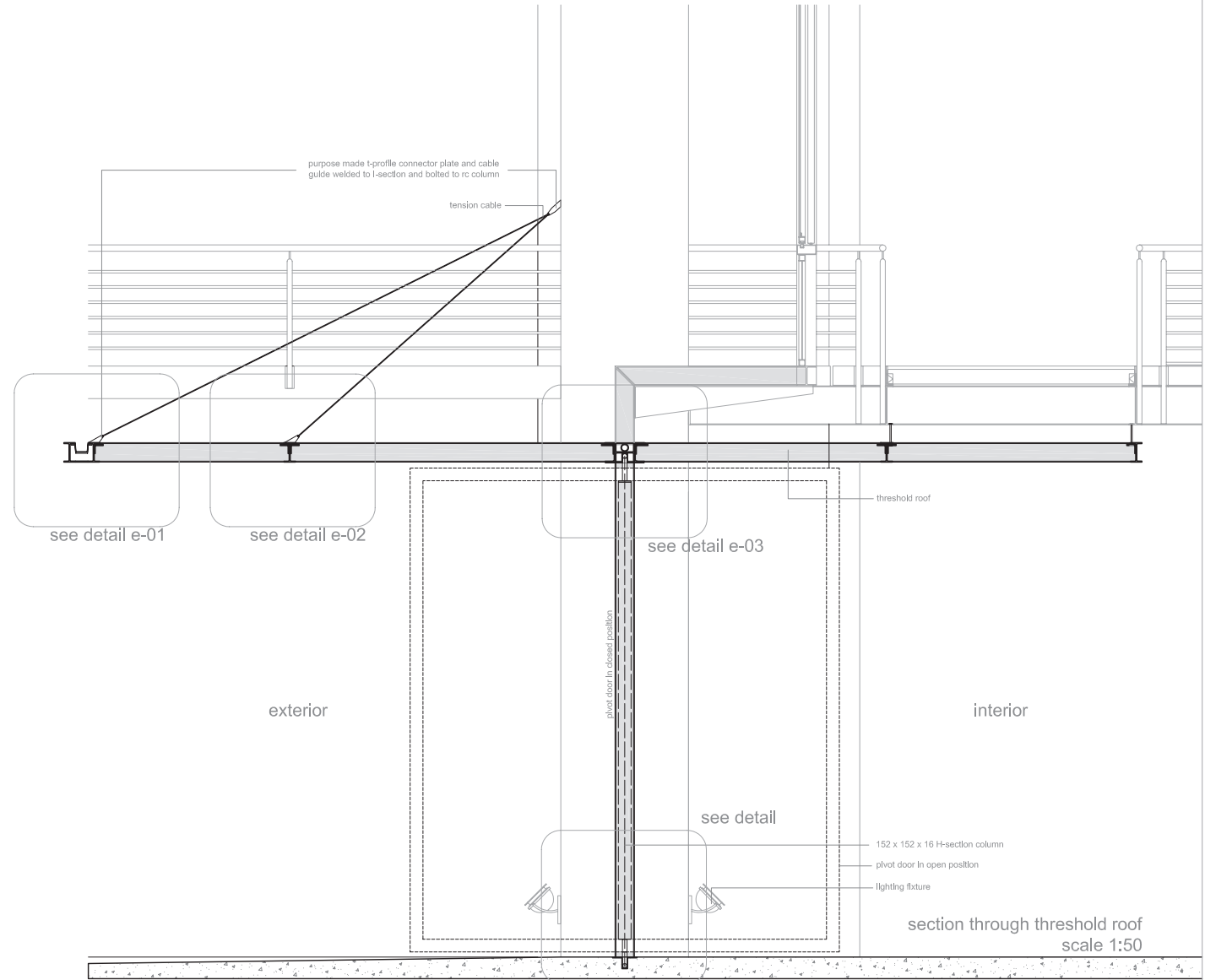
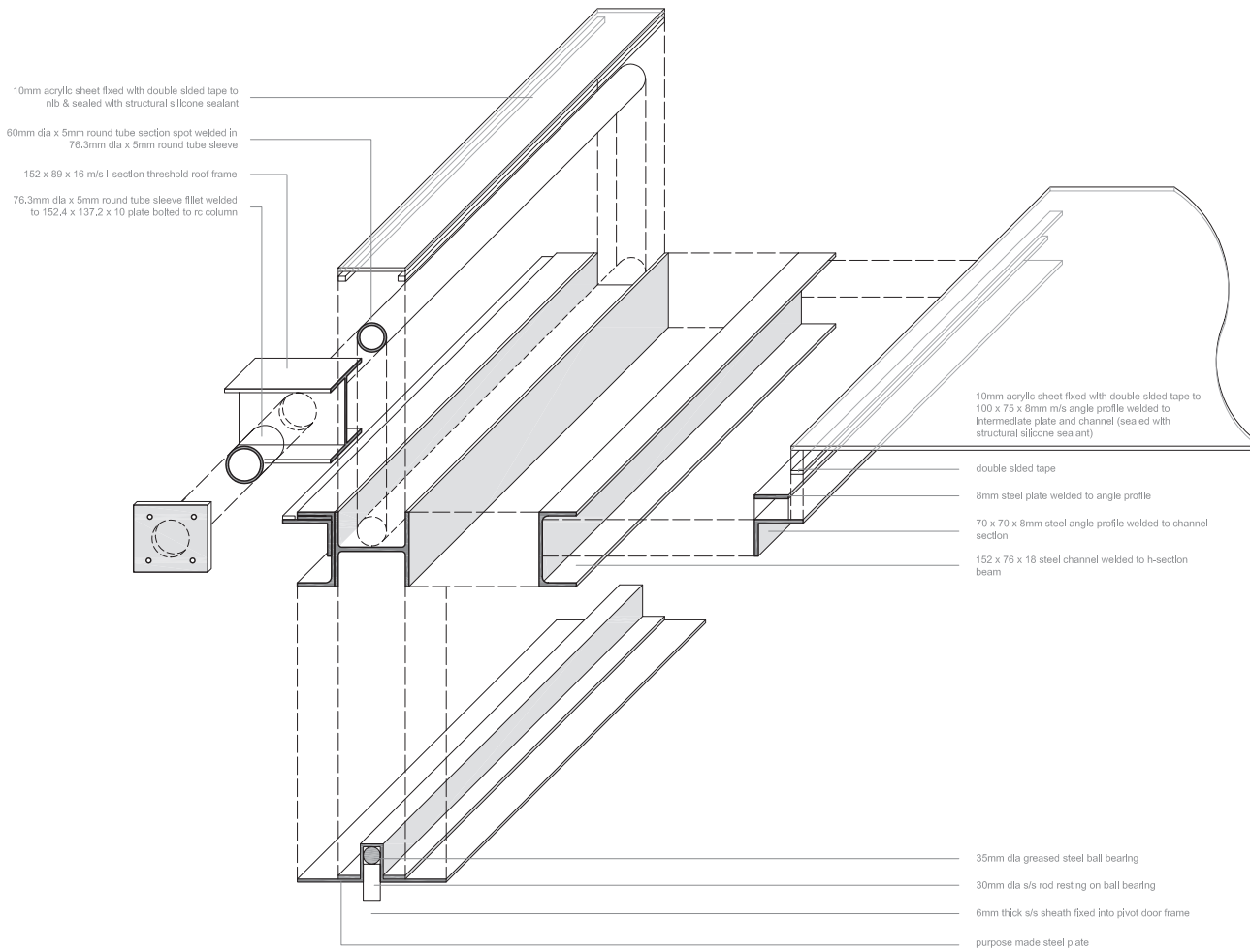


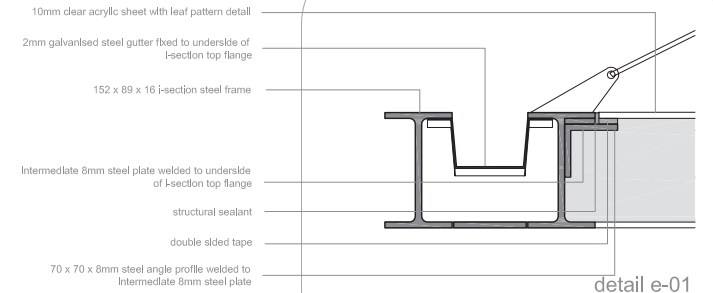
Figure 12.36 Detail of threshold roof



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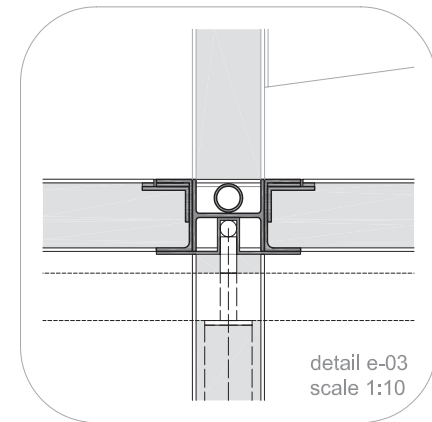
exploded view of detail e-03
scale 1:10



detail e-01
gutter and edge detail
scale 1:10



detail e-02
glass joint detail
scale 1:10



detail e-03
scale 1:10

detail e
threshold roof



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Staircase Wall

The main staircase wall is the most southern point of the building and thus is the portion of the building that is in closest proximity to the synagogue. The textured off-shutter concrete finish of the staircase wall reflects the horizontal layers of the original brickwork layering of the western facade of the Old Synagogue. While the western facade of the wall tracks the user's height in the building in relative to that of the synagogue, the eastern facade tells of the history of the site and the historical events that took place within the synagogue. In this way the history of the site is used to generate an the public's interest while engaging the user that would otherwise not have access to this information.



Figure 12.38 Textured off-shutter concrete of the Millowners Association Building, 1955, Le Corbusier

Figure 12.39 Textured off-shutter concrete finish of the Satellite City Towers ,1957, Mexico City

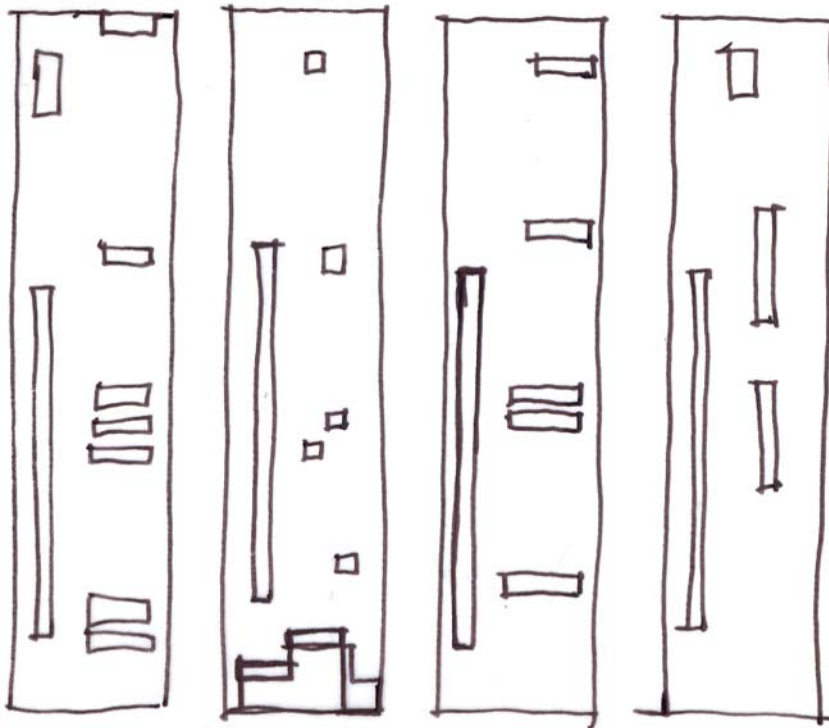


Figure 12.40 Elevation options for main staircase wall

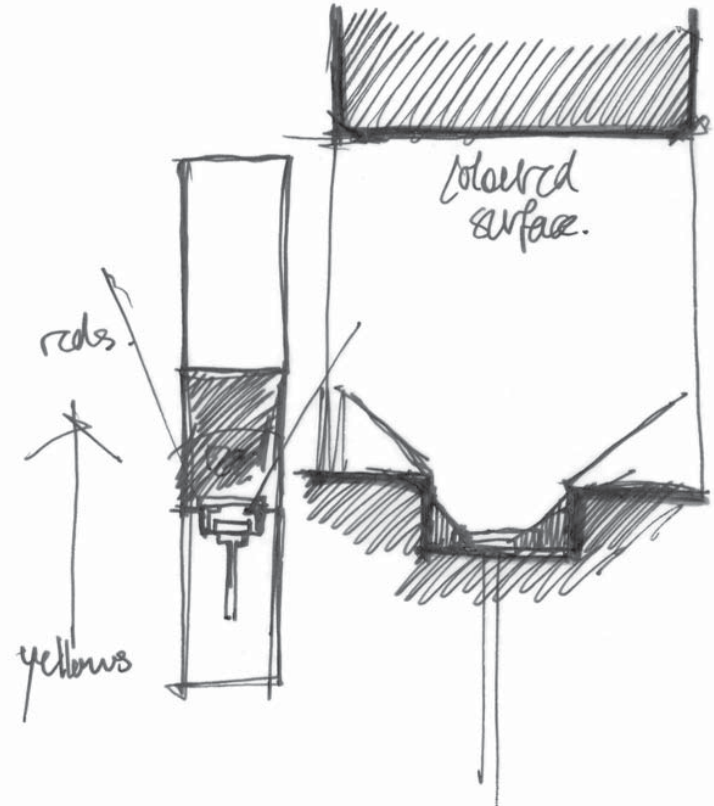
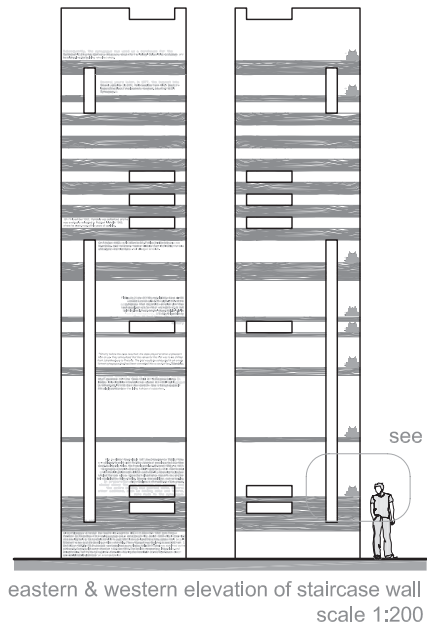


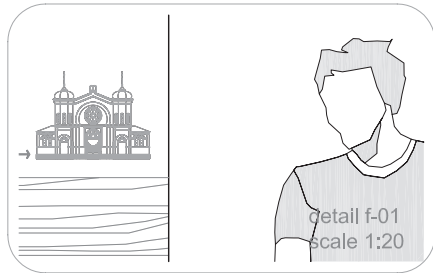
Figure 12.41 Section through main staircase wall



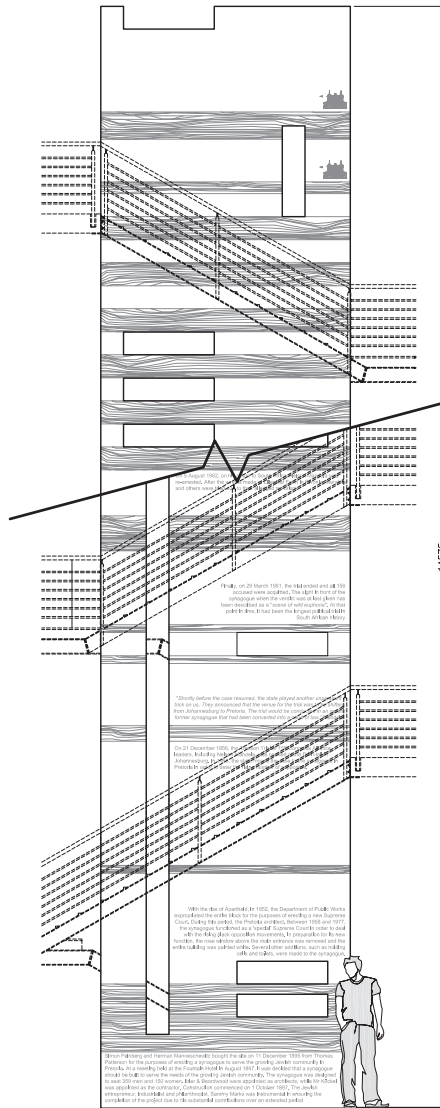
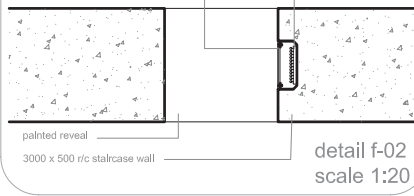
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see detail f-01



8400 x 10 x 3 light flex LED slide strip fixed to concrete wall with polyurethane epoxy
125 x 5mm acrylic diffuser panel fixed to angle profile with s/s countersunk screw



3

2

1

0

see detail f-02

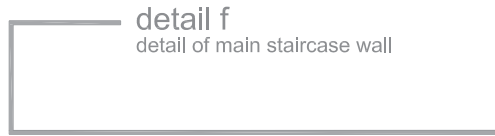
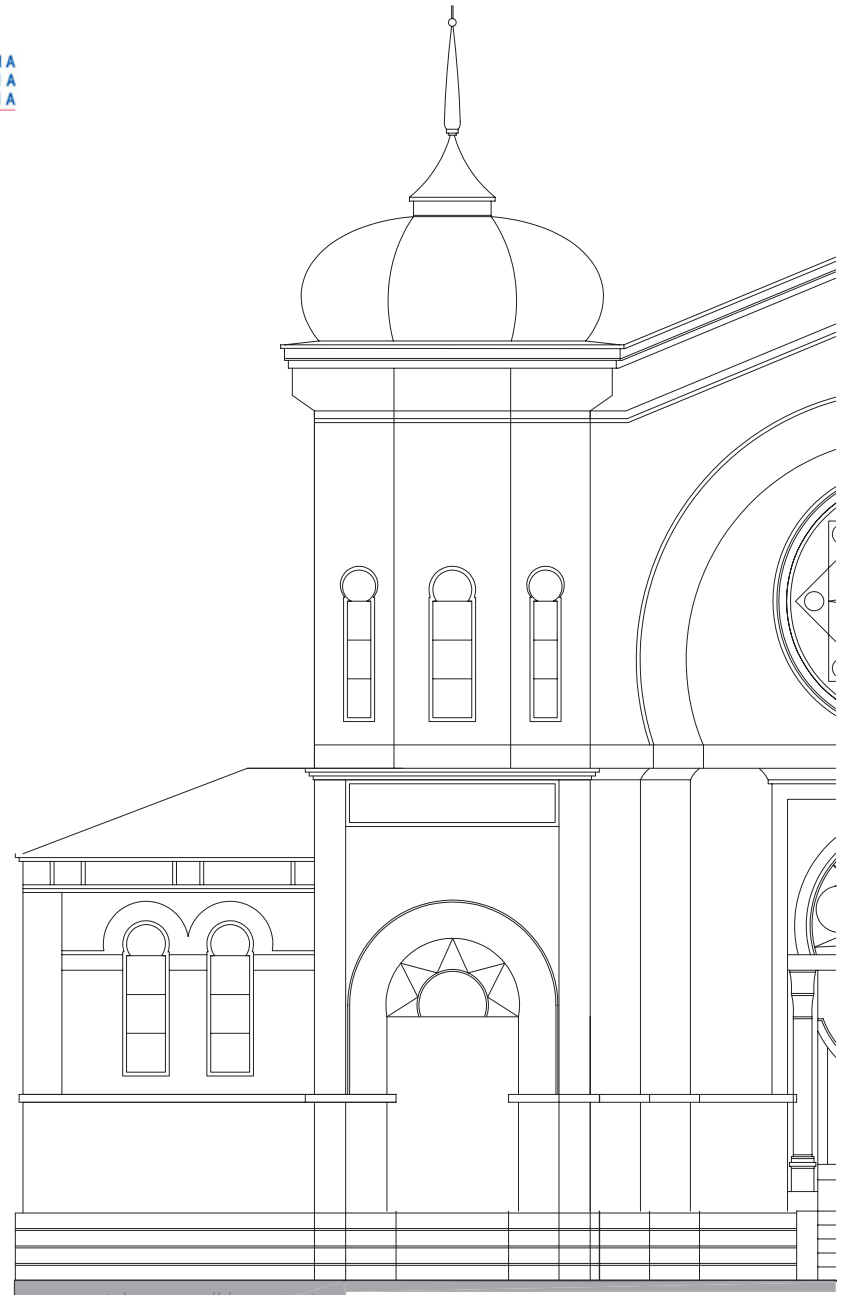
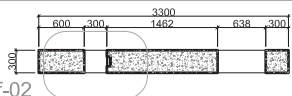


Figure 12.42 Detail of main staircase wall



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The Northern Facade

By investigating a series of facade options for the northern facade of the building an irregular pattern-like strategy was decided on. The strategy emerged from a set of design parameters based on achieving a good interior light quality in addition to the heights of the balustrade and doors throughout the building. Together these parameters, in addition to keeping with the concept of exposing movement in the building, contrast and highlight the open and closed elements of the facade. This is achieved by introducing solid and open panels that form the balustrade in addition to a second layer of glazing that forms the skin of the building. Here the pattern is achieved by introducing both clear and frosted glass panels that once again play on the open and closed sections of the facade.



Figure 12.43



Figure 12.44

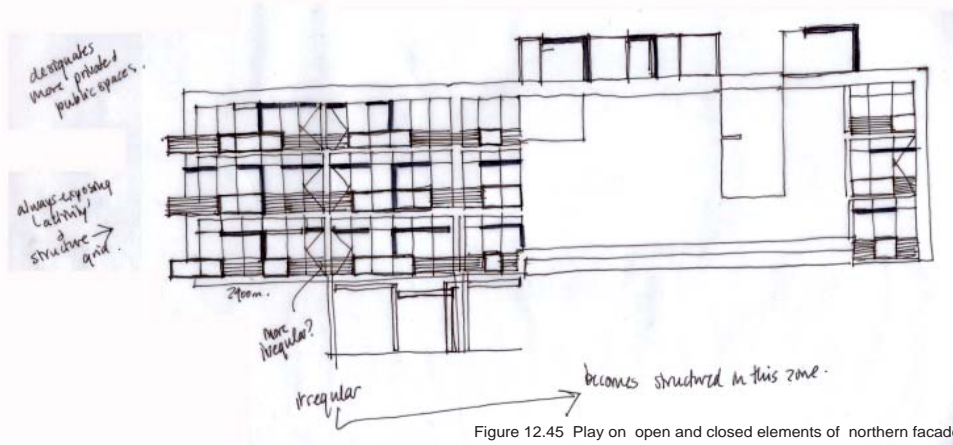


Figure 12.45 Play on open and closed elements of northern facade



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Schedule of Accomodation



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Ground Floor

Unit	Proposed Function	Area
Shop 0-01	Florist Preparation & Storage (8.9m ²)	29m ²
Shop 0-02	Printing & Postal Services	15.8m ²
Shop 0-03	Local Transport & Info Centre	55.4m ²
Restaurant 0-01	Light Meals throughout the day Bar (13.9m ²) Kitchen (24.7m ²)	152.7m ²
Restaurant 0-02	Coffee Shop - Section A Kitchen (9.0m ²) - Section B	36.2m ² 51.9m ²
Restaurant 0-03	Wine Bar - Section A - Section B	26.8m ² 29.3m ²
Public WC		55.2m ²
Service Access from Basement		14.2m ²
Circulation		114.6m ²

First Floor

Temporary Unit 1-01	Rental	28.6m ²
Temporary Unit 1-02	Rental	18.7m ²
Temporary Unit 1-03	Rental	19.3m ²
Temporary Unit 1-04	Rental	18.2m ²
Temporary Unit 1-05	Rental	18.7m ²
Temporary Unit 1-06	Rental	18.7m ²
Office Unit 1-01	Rental	130.7m ² Kitchenette (9.2m ²)
Office Unit 1-02	Rental	97.7m ² Kitchenette (7.4m ²)
Office Unit 1-03	Rental	136.7m ² Kitchenette (9.1m ²)
Circulation		232.5m ²
Unisex WC		14.4m ²

Second Floor

Temporary Unit 2-01	Rental	28.6m ²
Temporary Unit 2-02	Rental	18.7m ²
Temporary Unit 2-04	Rental	18.2m ²
Temporary Unit 2-05	Rental	18.7m ²
Temporary Unit 2-06	Rental	18.7m ²
Office Unit 1-01	Rental	130.7m ² Kitchenette (9.2m ²)
Office Unit 1-02	Rental	97.7m ² Kitchenette (7.4m ²)
Office Unit 1-03	Rental	136.7m ² Kitchenette (9.1m ²)
Circulation		232.5m ²
Unisex WC		14.4m ²

Third Floor

Luxury Unit 3-01 - Ground Floor		50.1m ²
Luxury Unit 3-02 - Ground Floor		39.4m ²
Luxury Unit 3-03 - Ground Floor		45.4m ²
Apartment 3-04	Ownership	54.5m ²
Apartment 3-05	Ownership	44.8m ²
Circulation		225.5m ²
Unisex WC		14.4m ²

Fourth Floor

Luxury Unit 3-01 - First Floor		20.3m ²
Luxury Unit 3-02 - First Floor		45.2m ²
Luxury Unit 3-09 - First Floor		18.9m ²

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Appendices



Appendix A - Backpacker Surveys

Survey of local backpackers - Cape Town

General:

Accommodation Type: Backpackers
Name: The Purple Turtle
Location: Long Street, Cape Town
Date: 17-05-2007

Person interviewed: bar lady (manager)
Duration of existence: 10 years

Facilities:

No of Rooms: 4
Room Type: dormitories
Bathrooms: 1

Restaurant on site: yes + 2 bars (open to public)
Breakfast included: no
Self-catering kitchen: no

Occupancy:

Current occupancy: 100%
Busiest time of year: 95% of year

Client Profile:

Gender: mixed
Age: mixed (many 20 year-olds)
Place of Origin: Sweden, mixed
Purpose of visit: tourism
Dislikes: crime
Likes: good location, convenient, culture
Common sightseeing destinations: Green point
Other destinations is SA: unknown

Other:

Transportation: meter taxi
Success of backpackers: location

General:

Accommodation Type: Backpackers
Name: Long Street Backpackers
Location: Long Street, Cape Town
Date: 17-05-2007

Person interviewed: barman (UK)
Duration of existence: 14-15 years

Facilities:

No of Rooms: 14
Room Type: double/ twin rooms and dormitories

Restaurant on site: no (only a pub)
Breakfast served: no
Self-catering kitchen: yes

Occupancy:

Current occupancy: 85%
Busiest time of year: weekends, summer

Client Profile:

Gender: mixed
Age: 18-28 years
Place of Origin: United Kingdom, Holland
Purpose of visit: toursim
Dislikes: -
Likes: atmosphere
Common sightseeing destinations: Cape POint, Table Mountain, Wine regions Shark Diving
Other destinations is SA: East Coast (Johannesburg only as a point of departure)

Other:

Transportation: rikis, walking, taxis (public)
Success of backpackers: location



General:

Accommodation Type: Backpackers
Name: Cat & Moose Backpackers
Location: Long Street, Cape Town
Date: 17-05-2007

Person interviewed: Manager (7 years)
Duration of existence: 9 years

Facilities:

No of Rooms: max capacity 35 people
Room Type: mixed dormitories

Restaurant on site: no
Breakfast served: no
Self-catering kitchen: yes, two kitchens

Occupancy:

Current occupancy: winter: 20-60%, summer 100%
Busiest time of year: Summer

Client Profile:

Gender: mixed
Age: mixed
Place of Origin: mixed
Purpose of visit: mixed
Dislikes: atm crime
Likes: City of Cape Town
Common sightseeing destinations: Stellenbosch, Table Mountain, V&A Waterfront
Other destinations is SA: Garden Route, Kruger Park, Namibia

Other:

Transportation: walk
Success of backpackers: transportation & location

General:

Accommodation Type: Backpackers
Name: Carnival Court Backpackers
Location: Long Street, Cape Town
Date: 17-05-2007

Person interviewed: Manager
Duration of existence: 6 Years

Facilities:

No of Rooms: 27
Room Type: mixed

Restaurant on site: no (only bar)
Breakfast served: no
Self-catering kitchen: yes

Occupancy:

Current occupancy: 70%
Busiest time of year: Dec-April

Client Profile:

Gender: mixed
Age: 22-30 years
Place of Origin: Germany, United Kingdom, Holland
Purpose of visit: tourism
Dislikes: -
Likes: location
Common sightseeing destinations: Table Mountain, Cape Point
Other destinations is SA: Garden Route

Other:

Transportation: public taxi, tours, walk, hire a car
Success of backpackers: location (change of paving of the street)



Survey of local backpackers - Pretoria

General:

Accommodation Type: Backpackers
Name: North South Backpackers
Location: Hatfield
Date: 13-03-2007

Person interviewed: Manager
Duration of existence: -

Facilities:

No of Rooms: max capacity 35 guests (including camping)
Room Type: coming, dorms & doubles

Restaurant on site: only a bar
Breakfast served: on request only
Self-catering kitchen: -

Occupancy:

Current occupancy: 20%
Busiest time of year: 65% capacity, slow during: 15 April-15 June and 15 December-15 January

Client Profile:

Gender: mixed (no single females)
Age: 26-41
Place of Origin: Europe
Purpose of visit: internships/ exchanges
Dislikes: safety
Likes: within walking distance of shops, clubs and bars (Hatfield), atmosphere
Common sightseeing destinations: Soweto & Apartheid Museum

Other:

Transportation: shuttle bus/ walking (very difficult)

General:

Accommodation Type: Backpackers
Name: Kia Ora Backpackers
Location: Pretoria City Centre
Date: 24-04-2007

Person interviewed: Receptionist
Duration of existence: -

Facilities:

No of Rooms: 7 (max 20 guests)
Room Type: mixed

Restaurant on site: yes
Breakfast served: no
Self-catering kitchen: no

Occupancy:

Current occupancy: low
Busiest time of year: November

Client Profile:

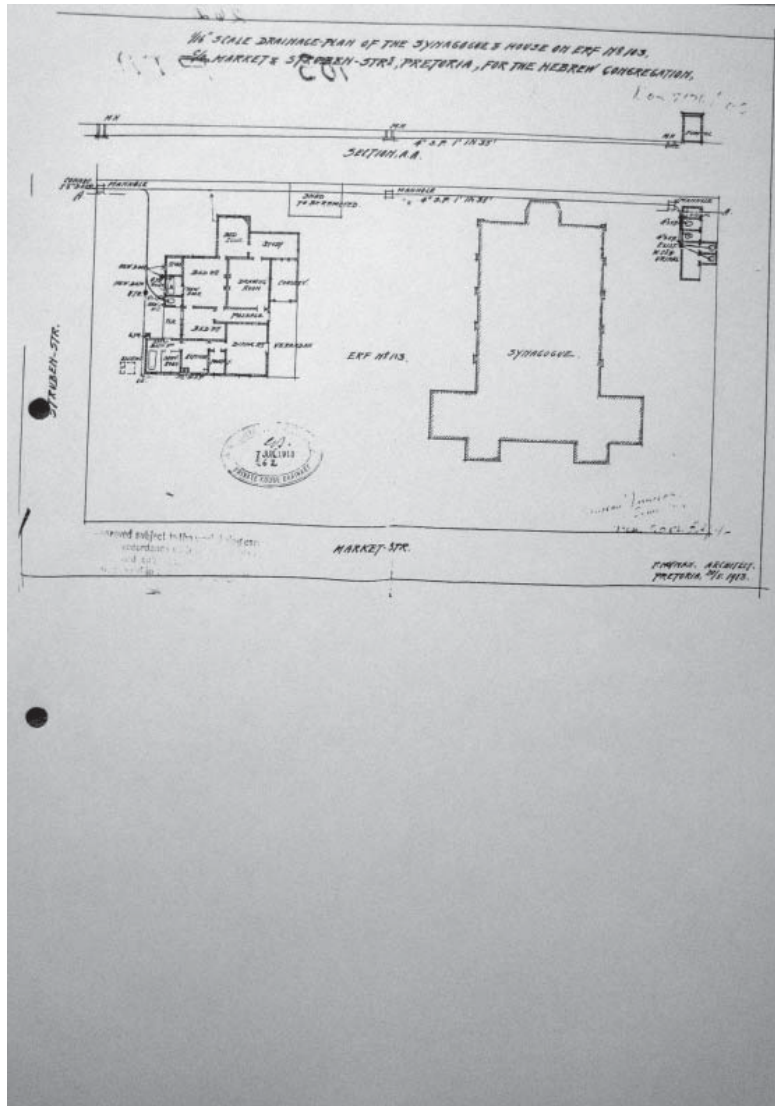
Gender: mixed
Age: -
Place of Origin: Australia, New Zealand, England and local
Purpose of visit: -
Dislikes: safety
Likes: -
Common sightseeing destinations: Victoria Falls, Kruger Park, Soweto, Union Buildings, Melrose House

Other:

Transportation: walk
Success of backpackers: central location

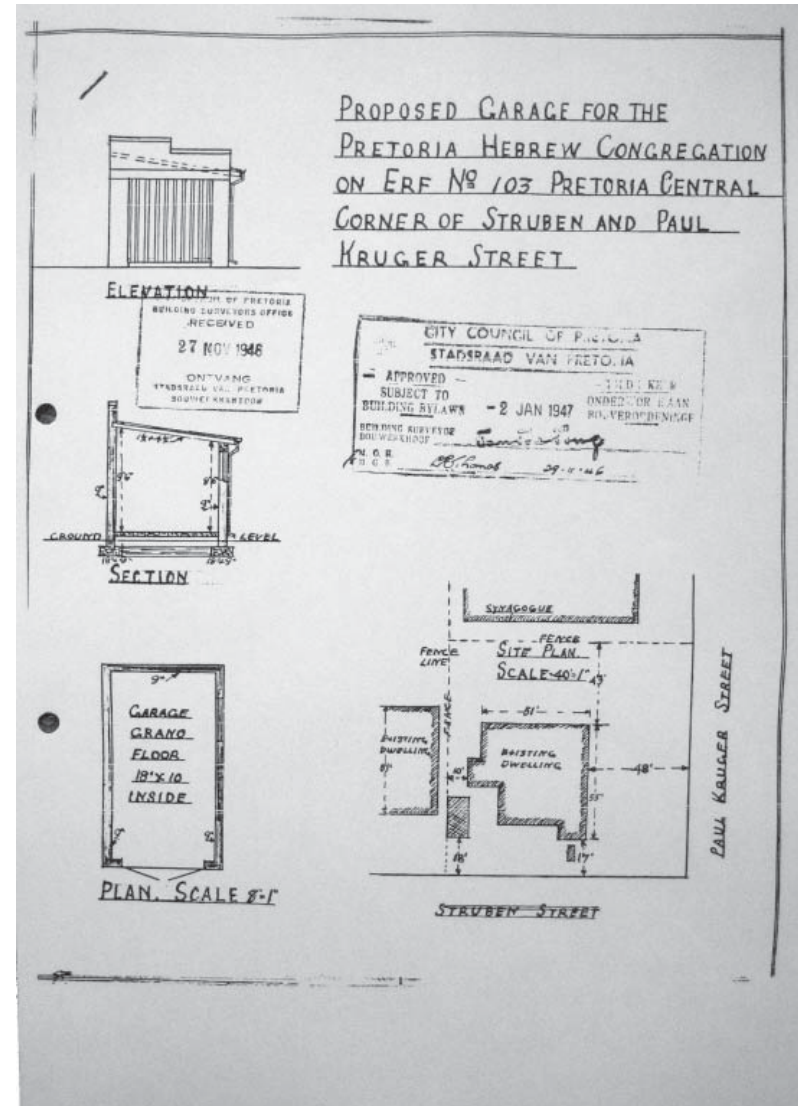
Appendix B

Drainage Plan of the Minister's House



Appendix C

Proposed Garage for the Hebrew Congregation



Appendix D

Proposals for the old Synagogue

Nigel Vos and Associates¹

In 1995, the DPW commissioned an evaluation of the building. Nigel Vos and Associates completed the evaluation and presented the department with a proposed function for the building. The proposal included the reconstruction of the Old Synagogue, which was to function as a “theatre in the round”, with the addition of several functional buildings including an Apartheid museum located south of the synagogue.

Retha MC Basson’s Dissertation²

A year later, Retha MC Basson proposed a Culture and Conservation Centre in fulfilment of her B (Architecture) at the University of Pretoria. Her proposal consists of training and educational facilities, a restaurant and coffee shop, in addition to a cultural museum to be housed in the original synagogue building. While the focus is on the proposed additional buildings, the restoration of the synagogue to its original state is central to the design. The proposal includes the documentation and subsequent removal of the additions made prior to its function as a ‘special’ Supreme Court.

DPW’s Report on the Development Possibilities and Sustainable use of the ‘Old Synagogue’ in Paul Kruger Street³

According to Buntman, the DPW released a third proposal in 2000 titled Report on the Development Possibilities and Sustainable Use of the Old Synagogue in Paul Kruger Street which evaluated previous proposals and suggested that the synagogue should be converted into a museum with a “strong tourist orientation”. According to the DPW assessment, the building could become an attractive focal point in the city centre by “linking physical features to significant past events”. By restoring the building, one could create a new interest in its historic significance and enhance public awareness.

Charisse Levitz proposal for the SAJBOD⁴

A further proposal was commissioned by the SAJBOD between 2000 and 2003. According to Buntman, the proposal, undertaken by Charisse Levitz, consisted of a ‘modern museum’ which is to reflect on Jewish history in Pretoria within a greater South African context (Buntman 2006:9).

Estee Schütte’s Dissertation⁵

Finally, while not directly addressing the Old Synagogue, in 2006, Estee Schütte, in fulfilment of her M (Architecture) at the University of Pretoria, proposed a boutique hotel on the site south of the synagogue. The proposal caters for recreational activities spilling out onto a public space situated between the proposed hotel and the Old Synagogue.

Alex Wapnick’s personal Interests⁶

According to various sources, a Jewish property owner in Pretoria, Alex Wapnick is interested in donating a substantial amount towards the restoration of the synagogue, with the subsequent conversion of the building into a centre for the disadvantaged urban population. Buntman points out that the proposal includes a soup kitchen and facilities for disadvantaged children. This centre would be run by the Jewish community, which would work hand in hand with local government departments.

Barbara Buntman’s “think tank”⁷











At this point in time, Barbara Buntman, along with a small team of people, has set up a ‘think tank’ to explore possible and suitable options for the Old Synagogue and the surrounding sites.

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3. Buntman 2006:9
4. LEVITZ, C. c2003. Proposal for the Development of the Old Synagogue, Paul Kruger Street, Pretoria. MA Anthropology. Johannesburg: Pretoria Council of the South African Jewish Board of Deputies
5. SCHÜTTE, E. 2006. Glass Roof Boutique Hotel: An urban Catalyst for the City of Tshwane. M Architecture Prof. Pretoria: University of Pretoria
6. including Buntman 2006:9
7. BUNTMAN 2007: personal interview

Appendix E - Sun Study

Technical Investigation

OPTION 01 = existing scenario					
Date	Time	Comment	Date	Time	Comment
21-Dec	8:00	MID SUMMER	21-Jul	8:00	MID WINTER
		morning sun penetrates into southern square (shined right through site onto panagos building (does not restrict lighting of other buildings))			minimal light penetration onto square
		staircase is illuminated			
		light shines through onto circulation bridges but does not penetarte further onto northern side of building			northern façade exposed to morning light
	12:00			12:00	PROBLEM SCENARIO
		minimal shading on eastern façade			minimal direct light on southern square (midday summer)
		partial shading on square			
		north-western corner: pleasantly shaded in midday in summer			northern façade has good exposure to northern light









16:00		16:00		
	southern square is partially shaded from western sun			no shadow cast on synagogue but square remains shaded
				exposed north-western facade with minimal light penetration into public square (some light penetrates into interior spaces)
	western restaurant/ shop requires shading (hot on late summer afternoon)			see above
18:00				
	Synagogue not shaded (highlighted by late afternoon sun (when square is in use))			
	Exposed western facade (but well shaded interior)			
	Late summer afternoon shading of square			















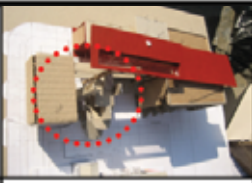





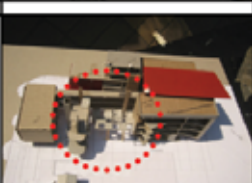







OPTION 02 = removal of first block on northern of facade					
Date	Time	Comment	Date	Time	Comment
21-Dec	8:00		21-Jul	8:00	
					more light on north-western corner of site
		no changes from scenario 01			eastern façade exposed to morning light but no light on southern square
					morning light penetrates deep into atrium (east west facing)
	12:00			12:00	PROBLEM SCENARIO
		no changes from scenario 01			more exposed north-western corner in winter-midday (from option 01)
		good light penetration into atrium			

16:00		16:00	
			no direct light
	no changes from scenario 01		
	shaded interior		







OPTION 03 removal of 2 blocks on northern façade					
Date	Time	Comment	Date	Time	Comment
21-Dec	8:00		21-Jul	8:00	
					minimal morning sunlight on public square
		no change from Scenario 01			morning light shines right through to Paul Kruger Street on north-western corner of site
					pedestrian view from Paul Kruger Street
	12:00			12:00	PROBLEM SCENARIO
		no change from Scenario 01			no change from Scenario 01
		more light on north-western corner of site-poorer summer scenario than option 01			more light on north-western corner (afternoon sun penetrates deeper into interior but does not reach southern square)
		minimal light penetration			no change from Scenario 01

	<p>minimal light penetration</p>			<p>no change from Scenario 01</p>
<p>16.00</p>			<p>16.00</p>	
				
	<p>no change from Scenario 01</p>			<p>more light on north-western corner (afternoon sun penetrates deeper into interior but does not reach southern square)</p>
	<p>limited direct light on southern square- more afternoon light would be desirable</p>			<p>good afternoon light on circulation routes/ bridges</p>

INVESTIGATION					
Date	Time	Comment	Date	Time	Comment
21-Jun	16:00				
					
removal of top floors					
		deeper light penetration into southern square			
removal of top floors + roof 01		deeper light penetration into southern square			
removal of top floors + roof 01 + staircase roof					

21-Dec	16.00				
					
					
					
					
Extended roof - SUMMER		no impact on public square in summer but deeper penetration into atrium and onto circulation bridges			
Extended roof - SUMMER					



Extended roof - WINTER		extended roof - minimal impact			
Extended and moved forward roof - WINTER 12:00		Imaximum diect light on public square			
Extended and moved forward roof - WINTER 16:00					



Appendix F

Baseline Document

In fulfillment of the project, a baseline document was submitted in March 2007. The baseline document appears as it did at the time of submission.

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Introduction

The site is located in the Pretoria, north of Church Square on Paul Kruger Street directly adjacent to the Old Synagogue built in 1897. The project aims to address the lack of temporary accommodation in Pretoria by providing low-cost temporary accommodation mainly for travelers, researchers and others in need of affordable accommodation in the city centre. The building will include other functions such as varying degrees of more permanent accommodation (such as penthouse apartments) as well as income generation conference facilities and retail/ entertainment businesses.

The objective of the project is act as a catalyst for regeneration in the area by introducing activity to the site through increasing numbers of visitors to the site, users of the site and creating interest in the site through public art, heritage and architecture. This document sets out the performance criteria of the project in terms of building type standards for similar buildings.



Performance Criteria

On Tuesday, 20 February 2007 at 19:00¹ the “2010 Imperative/ 2030 Challenge: Global Warming, Climate Change and the Built Environment” lecture was broadcast live worldwide. The speakers dealt with three different aspects of climate change and the impact that local buildings have on the global environment. Dr. James Hansen, Director of NASA Goddard Institute for Space Studies spoke on “A threat to the planet”, Edward Mazria AIA, senior principal of Mazria Inc and senior analyst for Southwest Climate Council presented the report titled “Resuscitating a Dying World: 2030 Challenge/ 2010 Imperative” while Chris Luebeckman, Director of the Global Foresight and Innovation Initiative and ARUP presented the inspiring lecture “Doing is Believing”.²

The presentations targeted specifically architects, engineers and others that are involved with decision-making in the construction industry with the objective of raising awareness of the problem while providing steps towards attaining the goals. The goals as set out in the 2030 °Challenge are as follows:³

The fossil fuel reduction standard for new building is reduced as follows:

60% in 2010

70% in 2015

80% in 2020

90% in 2025

Carbon neutral in 2030

This goal suggests that by 2030 all buildings should be using no fossil-fuel, nor greenhouse gas emitting energy to operate. The focus therefore is on high-performance design.

Furthermore, steps were presented on how to begin working towards an achieving these goals:

- All new buildings, developments and major renovations should be designed to meet a fossil fuel, greenhouse gas (GHG) emitting, energy consumption performance standard of 50% of the regional (or country) average for that building type.

- At a minimum, an equal amount of existing building area be renovated annually to meet a fossil fuel, greenhouse gas (GHG)-emitting, energy-consumption performance standard of 50% of the regional (or country) average for that building type (50% of the regional average through innovative design strategies, the application of renewable technologies and/or the purchase - 20% maximum – of renewable energy).

The emphasis of the 2010 Imperative is on ecological literacy in design education. Design schools are encouraged to lead the way by converting their buildings to carbon neutral environments through sustainable design strategies, generating on-site renewable power and purchasing renewable power.

Project performance aims

Architects have been placed in a position where they are able to address the growing environmental concerns. Buildings worldwide are major energy consumers due to the embodied energy of the materials specified right through to the running and maintenance of buildings. The objective is to reduce the consumption of energy of the building (using the SBAT tool) relative to other similar buildings by using passive systems wherever possible. While the presentation targeted wealthy first world countries, the principles are applicable in South Africa.

1. live webcast in room 3-3 of the Architectural Department at the University of Pretoria, in South Africa.

2. The 2010 Imperative Global Emergency 12-03-2007: http://2010imperative.org/2010_imperative.html

3. The 2030 Challenge 12-03-2007: <http://2010imperative.org/2030challenge.html>

The SBAT Evaluation Tool

The SBAT (Sustainable Building Assessment Tool) as designed by Jeremy Gibbert, allows for the evaluation of the performance of a building in terms of its sustainability. It covers social, economic and environmental aspects. The purpose of the baseline document is to set down performance criteria for the building to be designed. This initial application of the tool has been set out to identify performance goals and expectations. The tool will be tested against the final result.



Figure 15.1 & 15.2 Sketch: Site Analysis

Social Issues:

Occupant Comfort

- Lighting: exploitation of northern façade for natural lighting while avoiding unnecessary heat gain (although thermal gain is desirable in winter) and glare in the building. Southern façade maximises views of the Old Synagogue and allows for indirect natural light (large windows)
- Ventilation: Natural as far as possible
- Noise: 40bd sound insulation from traffic on Struben Street. Avoid noise transmission from inside the building (stairways, service ducts etc)
- Views: South: onto public square and Old Synagogue
North: Jacarandas on Struben Street and future developments on open land
West: View of Panangos Building
- Access to green: public space (soft landscaping) and increasing green courtyards and balconies with increasing height in building

Inclusive Environments

- Public Transport: South Africa has a serious lack of public transport with the bulk of it linking the townships and the city in the form of railways lines and a network of taxis. Currently, taxis operate on Struben and Paul Kruger Streets but usage thereof is limited to one population group. The vision for the city in terms of the urban framework⁴ is to 'pedestrianise' Paul Kruger Street while discouraging the use of private transportation. The framework suggests the introduction of a tram system and the widespread use of bicycles. The intersection of Struben and Paul Kruger Street becomes a tram interchange node.
- Routes/ changes in level/ edges: inclusive design in terms of NBR
- Access:⁵

Proposed

- Entrance path gateways minimum 850 mm clear width
- Dropped kerbs where main paths meet roads and drives
- Dwelling approaches level or gently sloping
- Lifts, where provided, to be sized for wheelchair access
- Main paths minimum 900 mm wide, with firm, even surface
- Level area at access point, at threshold level
- Entrance door flush threshold (i.e. max. 15 mm upstand)
- Entrance door minimum clear opening width 800 mm
- Internal doors minimum clear opening width 750 mm
- Corridors at entrance level wide enough for wheelchair access
- Staircase suitable for future stair-lift (in some areas), and
- entrance-level WC and basins in units smaller than 5 persons

Current

- lack of public toilets in Pretoria north. Provision of accessible public toilets on public square.
- lack of Public space in Pretoria. Provision of public space
- Lack of access and acknowledgment of SA heritage: most heritage buildings are inaccessible to the public. Provision of access and education of heritage with regard to the Old Synagogue. Allow for experience of heritage and a sense of place.
- Post office: Head office on church square
- Retail: Church Street, Van der Walt Street and Sammy Marks Square are essentially shopping boulevards and squares
- Childcare: There are several schools located in the area
- Banking: Bank branches on Vermeulen Street and Church Street
- Telephone facilities: informal telephone facilities on Church Square and at the post office
- Email/ photocopying: none
- Residential: sparsely scattered throughout the city

4. refer to p15 for more information regarding the proposed group framework

5. Adler (1999: Part 35)



Figure 15.3: Current facilities within walking distance of site

Participation and Control

- Environmental Control: Users can easily adjust the interior environment (ventilation, lighting etc) aided by passive shading which allows thermal gain in winter.
- User Adaptation: furniture and fittings are based on modular dimensions to allow for maximum flexibility of space
- Social Spaces: communal facilities (kitchens, balconies, courtyards and public space) allow for easy informal interaction between guests
- Layers of space usage:
 - Public- high movement along main pedestrian routes (limited interaction- destination orientated traffic)

 - Public- ground floor retail and public recreational space (high interaction)

 - Semi-public- Interior spaces for all building users (including restaurant guests)

 - Semi-private- courtyards, balconies and recreational spaces on individual floors catering for a limited number of people

 - Private: individual rooms

Furthermore, the building provides access to retail including services, conference facilities and leisure and public recreational facilities

- Community involvement: Due to the nature of the process of urban regeneration, the building process has to accommodate community involvement in order to successfully integrate the building and the introduced functions into the urban environment. Due to the nature of the building and current lack of community in the area, it is impossible to allow user-participation with exception of the building owner, apartment owners and management teams.

- Collaborative partnership: with SAHRA to encourage access, education and integration of South Africa's political and architectural heritage into the urban environment

Education, Health and Safety:

- Education: access to support facilities and access to the Old Synagogue (interactive education through experience)
- Health: access to first aid equipment; designated smoking areas away from air intakes
- Security: clear visual links, safe approach to building, exterior lighting
Implementation of crime prevention principles:⁶

- a surveillance and visibility
- b territoriality
- c access and escape routes
- d image and aesthetics
- e target hardening

Economic Issues

Sources

The economy of an area can be stimulated by building that use and develop social skills.

- Local contractors: 80% of construction to be carried out by contractors within 40km of the project
- Local materials: 80% of materials to be sourced within 200km of the site
- Local component manufacture: 80% to be manufactured within 200km of the site
- Outsource opportunities: catering, cleaning, and small retail opportunities to be carried out by small emerging companies (this could create opportunities for BEE operators in line with government policies)
- Tenant restrictions: encourage local emerging businesses and promote a sense of place through local commercial activities (no franchises)
- Repairs and maintenance: carried out by contractors within 200km of the site

6. Kruger et al (2001:33)

Efficiency Use

- Usable Space: WCs, circulation and plant rooms etc not more than 20% of building

- Occupancy goals

Good space management and 'hot-desking' operation of facilities allows greater occupancy of building. Facilities should be available for extended working hours to accommodate a greater degree of functions which simultaneously contributes to on-site activity

- a Penthouse Apartments: 100% occupancy (5% vacancy)- annual contract
- b Temporary Residency: 100% occupancy (15% vacancy)- annual contracts
- c Temporary Accommodation: 100% occupancy (15% vacancy-seasonal)
- d Other facilities (conference room etc): 30h/week for all living/working units (allows for flexible use)

Adaptability and Flexibility

Building must be able to accommodate change in a sustainable manner (easy to retrofit, and accommodate and new function)

- Vertical dimension: minimum 3m floor to ceiling height
- Internal partitions: non-load bearing to accommodate change (units designed according to open building principles to accommodate change in unit size easily)
- Services: easy access to electrical, telephonic and internet connections (wireless throughout building- and use of suspended floors/ ceilings where necessary)

Ongoing Costs

- Maintenance: easy access for cleaning (i.e. no cherry pickers to clean windows) and repairs (light bulbs)
- Cleaning: hard wearing in high traffic areas
- Security: limit requirement and cost of security through design
- Disruption and downtime: limited effect on user

Capital Costs

- Consultant fees
- Build-ability
- Construction
- Shared costs
- Shared arrangements

Environmental Issues

Water

- Rainwater (including stormwater): harvested, stored and used
- Water-use: efficient devices used throughout the building
- Grey Water: recycled where possible
- Surface materials: absorbent outdoor surfaces (soft landscaping) to reduce stormwater run-off and watering requirements
- Planting: maintain existing trees and plant only indigenous tree

Energy

- Location: within 400m of public transport (the only form of public transport is taxis; vision incorporates a public transport network⁷)
- Ventilation: Passive ventilation (mechanical only in limited parts of the building e.g. conference centre)
- Heating and cooling: passive (through orientation and shading devices)
- Appliances and fittings: energy efficient lighting and appliances (80% of light fittings to be energy efficient- i.e. fluorescent)
- Use energy generated from renewable sources wherever possible (solar-panels)
- Key tag activated master switches in guestrooms to save energy
- The use of bicycles and walking is encouraged to reduce carbon emissions of private vehicles
- Locally grown food served in restaurants
- Paper is recycled and used for stationary (on sale at site)

7. refer to p15 for more information on the proposed public transport network of the proposed group framework

Renewable energy

- Toxic waste: safe disposal of printer toners and other toxic waste
- Inorganic waste: sorted
- Organic waste: composted (on site if possible)
- Sewerage: operates on city system
- Construction waste: minimised and re-used on site (damaged bricks and tiles)

Site

- Brownfield site: yes
- Neighbouring site: prevent shading of other building (Synagogue must have northern light to shine through stain glass windows and possible opened façade)
- Vegetation: extensive use of vegetated courtyards, window boxes & roof gardens
- Landscape inputs: avoid artificial inputs (e.g. fertilizers)

Materials and Components

- Embodied Energy: 80% of building made from low embodied energy components (e.g. concrete structure)- difficult to measure
- Materials: 80% made from renewable resources
- Manufacturing processes: avoid processes that release greenhouse gases- difficult to monitor
- Recycled components: 10% of materials and components from recycled resources
- Construction processes:⁷ minimally impact the environment (protect roots from existing trees during construction; avoid drainage of toxic fluids etc).

Design Factors

Location

- Location on major envisioned pedestrian route
- Situated on historical north south axis of the city
- Addresses lack of public space, public facilities and lack of accommodation in Pretoria city centre

Urban Regeneration

- Project promotes urban regeneration on the site (catalytic effect on surrounding areas) by activating the site and creating interest in the site

Heritage

- Project should promote awareness of architectural and political heritage
- Project allows for education and appreciation of local heritage

Factors to consider⁹

a Is the building physically right for the location?

The building is located north of church square, the north being the more neglected portion of the city. The site is on the threshold between active functioning part of the city (closer to Church Square) and the northern more neglected part. It is at this point that the building heights change from single storey in the north to multi-storey. Currently this point functions as a gateway into the city from the north. It is located in close proximity to the physical city centre, forms part of the inner city and would fulfil functions currently lacking in the north.

b Does the building address the amount and timing of visitors to the site?

Currently there is little activity on site beside Struben Street Motors that displays second hand cars on the corner portion of the site. The project seeks to attract activity to the site through urban regeneration by means of public art etc. The project seeks to promote Pretoria as a tourist destination (as well as a starting point for longer-distance tours in and around

8. Sorvig & Thompson (2000: 29-195)

9. Questions taken from: Factors to consider in a development proposal 12-03-2007: http://www.twinshare.crctourism.com.au/factors_to_consider.htm

southern Africa. It aligns itself with the Tshwane Tourism Awards Programme for 2006/7. Current figures of tourists passing through Pretoria are unknown.

c Is this a good use of the site or building as opposed to other possible uses?

Currently Struben Street Motors is looking at purchasing a portion of the site to display second hand vehicles. The city council is proposing a large L-shaped public square to surround the Synagogue. The objective of the project is to propose a better suited function to the site while simultaneously allowing for public space.

d How will the character of the site be preserved?

The Synagogue's minister's house, previously located on the site as well as the religious, political and architectural heritage of the site is to be preserved and emphasised as a method of attracting activity to the site and creating a place-specific experience for the visitor to the site.

e What is the potential value to the local community in terms of employment and increased spending?

While the project provides inner city housing and work opportunities on a very small scale, it addresses current lack of facilities in the city and acts as a catalyst for other activities (housing, retail etc opportunities) by introducing people to the site beyond standard working hours (increasing safety by introducing activity).

f Is the proposal part of a longer term development plan?

The project is a catalyst for the area and promotes pedestrian activity in the area. The goal is to encourage urban-regeneration in the northern part of the city.

g What is the likely demand for the facility and what recreational value will it offer visitors?

The demand for inner city housing, accommodation and the lack of public facilities will all be addressed on a small scale. The project focuses on providing temporary accommodation. It has a high recreational value for

both visitors and residents of Pretoria.

h Do the local people support the proposal and will they be able to make use of the facility?

There is currently not much support as this part of the city is increasingly neglected as one moves further north. Local people (including schools, businesses etc) are encouraged to make use of the facilities.

i What plans have been made for subsequent management and maintenance of the site?

To be confirmed

j Will local materials and skills and expertise be used?

Yes

k Does the design reflect the character of the area- is it compatible with the local climate, topography and materials?

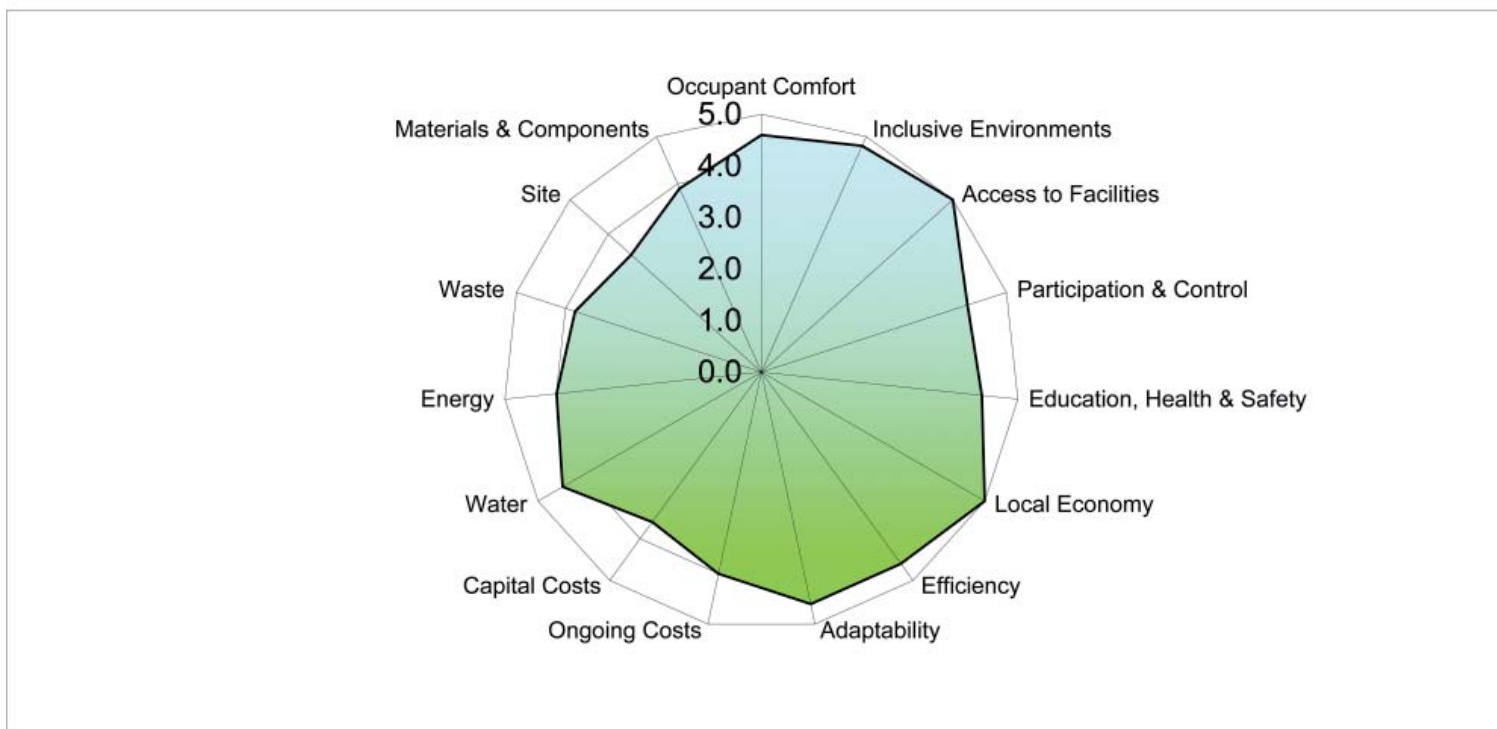
Yes

l Is provision made for people with disabilities?

Yes (accessibility as required in NBR)

SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT- P) V1

PROJECT	ASSESSMENT
Project title:	Date:
Location:	Undertaken by:
Building type (specify): Residential/Community/Commercial	Company / organisation:
Internal area (m2):	Telephone: Fax:
Number of users:	Email:
Building life cycle stage (specify): Design/Construction/Operation	



Social 4.6

Economic 4.4

Environmental 3.9

Overall 4.3

Figure 15.04 Sustainable Building Assessment Tool Results Page

Building Performance - Social

Criteria	Indicative performance measure	Measured	Points
SO 1 Occupant Comfort		<i>Explanatory notes</i>	4.6
SO 1.1 Daylighting	% of occupied spaces that are within distance 2H from window, where H is the height of the window or where there is good daylight from skylights	80	0.8
SO 1.2 Ventilation	% of occupied spaces have equivalent of opening window area equivalent to 10% of floor area or adequate mechanical system, with unpolluted air source	100	1.0
SO 1.3 Noise	% of occupied spaces where external/internal/reverberation noise does not impinge on normal conversation (50dbA)	80	0.8
SO 1.5 Thermal comfort	Temperature of occupied space does not exceed 28 or go below 19°C for less than 5 days per year (100%)	100	1.0
SO 1.5 Views	% of occupied space that is 6m from an external window (not a skylight) with a view	100	1.0
SO 2 Inclusive Environment		<i>Explanatory notes</i>	4.8
SO 2.1 Public Transport	% of building (s) within 400m of disabled accessible (20%) and affordable (80%) public transport	100	1.0
SO 2.2 Information	Comprehensive signage provided (50%), Signage high contrast, clear print signage in appropriate locations and language(s) / use of understandable symbols / manned reception at all entrances (50%)	100	1.0
SO 2.3 Space	% of occupied spaces that are accessible to ambulant disabled / wheelchair users	80	0.8
SO 2.4 Toilets	% of occupied space with fully accessible toilets within 50m along easily accessible route	100	1.0
SO 2.5 Fittings & Furniture	% of commonly used furniture and fittings (reception desk, kitchenette, auditorium) fully accessible	100	1.0
SO 3 Access to Facilities		<i>Explanatory notes</i>	5.0
SO 3.1 Children	All users can walk (100%) / use public transport (50%) to get to their childrens' schools and creches	100	1.0
SO 3.2 Banking	All users can walk (100%) / use public transport (50%) to get to banking facilities	100	1.0
SO 3.3 Retail	All users can walk (100%) / use public transport (50%) to get to food retail	100	1.0
SO 3.4 Communication	All users can walk (100%) / use public transport (50%) to get to communication facilities (post/telephone/internet)	100	1.0
SO 3.5 Exercise	All users can walk (100%) / use public transport (50%) to get to recreation/exercise facilities	100	1.0
SO 4 Participation & Control		<i>Explanatory notes</i>	4.2
SO 4.1 Environmental control	% of occupied space able to control their thermal environment (adjacent to openable windows/thermal controls)	100	1.0
SO 4.2 Lighting control	% of occupied space able to control their light (adjacent to controllable blinds etc/local lighting control)	100	1.0
SO 4.3 Social spaces	Social informal meeting spaces (parks / staff canteens / cafes) provided locally (within 400m) (100%)	100	1.0
SO 4.4 Sharing facilities	5% or more of facilities shared with other users / organisations on a weekly basis (100%)	70	0.7
SO 4.5 User group	Users actively involved in the design process (50%) / Active and representative management user group (50%)	50	0.5
SO 5 Education, Health & Safety		<i>Explanatory notes</i>	4.3
SO 5.1 Education	Two percent or more space/facilities available for education (seminar rooms / reading / libraries) per occupied space (75%). Construction training provided on site (25%)	80	0.8
SO 5.2 Safety	All well used routes in and around building well lit (25%), all routes in and around buildings visually supervised (25%), secure perimeter and access control (50%), No crime (100%)	80	0.8
SO 5.3 Awareness	% of users who can access information on health & safety issues (ie HIV/AIDS), training and employment opportunities easily (posters/personnel/intranet site)	70	0.7
SO 5.4 Materials	All materials/components used have no negative effects on indoor air quality (100%)	100	1.0
SO 5.5 Accidents	Process in place for recording all occupational accidents and diseases and addressing these	100	1.0

Table 15.01 Social Building Performance

Building Performance - Economic

	Criteria	Indicative performance measure	Measured	Points
EC 1	Local economy		<i>Explanatory notes</i>	5.0
EC 1.1	Local contractors	% value of the building constructed by local (within 50km) small (employees<20) contractors	100	1.0
EC 1.2	Local materials	% of materials (sand, bricks, blocks, roofing material) sourced from within 50km	100	1.0
EC 1.3	Local components	% of components (windows, doors etc) made locally (in the country)	100	1.0
EC 1.4	Local furniture/fitings	% of furniture and fittings made locally (in the country)	100	1.0
EC 1.5	Maintenance	% of maintenance and repairs by value that can, and are undertaken, by local contractors (within 50km)	100	1.0
EC 2	Efficiency		<i>Explanatory notes</i>	4.6
EC 2.1	Capacity	% capacity of building used on a daily basis (actual number of users / number of users at full capacity*100)	80	0.8
EC 2.2	Occupancy	% of time building is occupied and used (actual average number of hours used / all potential hours building could be used (24) *100)	80	0.8
EC 2.3	Space per occupant	Space provision per user not more than 10% above national average for building type (100%)	100	1.0
EC 2.4	Communication	Site/building has access to internet and telephone (100%), telephone only (50%)	100	1.0
EC 2.5	Material & Components	Building design coordinated with material / component sizes in order to minimise wastage. Walls (50%), Roof and floors (50%)	100	1.0
EC 3	Adaptability		<i>Explanatory notes</i>	3.9
EC 3.1	Vertical heights	% of spaces that have a floor to ceiling height of 3000mm or more	80	0.8
EC 3.2	External space	Design facilitates flexible external space use (100%)	80	0.8
EC 3.3	Internal partition	Non loadbearing internal partitions that can be easily adapted (loose partitioning (100%), studwall (50%), masonry (25%))	50	0.5
EC 3.4	Modular planning	Building with modular structure, envelope (fenestration) & services allowing easy internal adaptation (100%)	80	0.8
EC 3.5	Furniture	Modular, limited variety furniture - can be easily configured for different uses (100%)	100	1.0
EC 4	Ongoing costs		<i>Explanatory notes</i>	4.0
EC 4.1	Induction	All new users receive induction training on building systems (50%), Detailed building user manual (50%)	100	1.0
EC4.2	Consumption & waste	% of users exposed on a monthly basis to building performance figures (water (25%), electricity (25%), waste (25%), accidents (25%))	30	0.3
EC 4.2	Metering	Easily monitored localised metering system for water (50%) and energy (50%)	100	1.0
EC4.3	Maintenance & Cleaning	% of building that can be cleaned and maintained easily and safely using simple equipment and local non-hazardous materials	100	1.0
SO 4.5	Procurement	% of value of all materials/equipment used in the building on a daily basis supplied by local (within the country) manufacturers	70	0.7
EC 5	Capital Costs		<i>Explanatory notes</i>	3.6
EC 5.1	Local need	Five percent capital cost allocated to address urgent local issues (employment, training etc) during construction process (100%)	100	1.0
EC5.2	Procurement	Tender / construction packaged to ensure involvement of small local contractors/manufacturers (100%)	100	1.0
EC 5.3	Building costs	Capital cost not more than fifteen % above national average building costs for the building type (100%)	100	1.0
EC5.4	Technology	3% or more of capital costs allocated to new sustainable/indigenous technology (100%)	60	0.6
EC 5.5	Existing Buildings	Existing buildings reused (100%)	0	0.0

Table 15.02 Economic Building Performance

Building Performance - Environmental

Criteria	Indicative performance measure	Measured	Points
EN 1 Water		<i>Explanatory notes</i>	4.5
EN 1.1 Rainwater	% of water consumed sourced from rainwater harvested on site	80	0.8
EN 1.2 Water use	% of equipment (taps, washing machines, urinals showerheads) that are water efficient	100	1.0
EN 1.3 Runoff	% of carparking, paths, roads and roofs that have absorbant/semi absorbant/permeable surfaces (grassed/thatched/looselaid paving/ absorbant materials)	65	0.7
EN 1.4 Greywater	% of water from washing/relatively clean processes recycled and reused	100	1.0
EN 1.5 Planting	% of planting (other than food gardens) on site with low / appropriate water requirements	100	1.0
EN 2 Energy		<i>Explanatory notes</i>	4.0
EN 2.1 Location	% of users who walk / cycle / use public transport to commute to the building	100	1.0
EN 2.2 Ventilation	% of building ventilation requirements met through natural / passive ventilation	80	0.8
EN 2.3 Heating & Cooling	% of occupied space which relies solely on passive environmental control (no or minimal energy consumption)	80	0.8
EN 2.4 Appliances & fittings	% of appliances / lighting fixtures that are classed as highly energy efficient (ie energy star rating)	70	0.7
EN 2.5 Renewable energy	% of building energy requirements met from renewable sources	70	0.7
EN 3 Waste		<i>Explanatory notes</i>	3.8
EN 3.1 Toxic waste	% of toxic waste (batteries, ink cartridges, flourescent lamps) recycled	100	1.0
EN 3.2 Organic waste	% of organic waste recycled	100	1.0
EN 3.3 Inorganic waste	% of inorganic waste recycled.	100	1.0
EN 3.4 Sewerage	% of sewerage recycled on site	0	0.0
EN 3.5 Construction waste	% of damaged building materials / waste developed in construction recycled on site	80	0.8
EN 4 Site		<i>Explanatory notes</i>	3.4
EN 4.1 Brownfield site	% of proposed site already disturbed / brownfield (previously developed)	100	1.0
EN 4.2 Neighbouring buildings	No neighbouring buildings negatively affected (access to sunlight, daylight, ventilation) (100%)	100	1.0
EN 4.3 Vegetation	% of area covered in vegetation (include green roofs, internal planting) relative to whole site	50	0.5
EN 4.4 Food gardens	Food gardens on site (100%)	0	0.0
EN 4.5 Landscape inputs	% of landscape that does not require mechanical equipment (ie lawn cutting) and or artificial inputs such as weed killers and pesticides	90	0.9
EN 5 Materials & Componen		<i>Explanatory notes</i>	3.9
EN 5.1 Embodied energy	Materials with high embodied energy (aluminium,plastics) make up less than 1% of weight of building (100%)	80	0.8
EN 5.2 Material sources	% of materials and components by volume from grown sources (animal/plant)	80	0.8
EN 5.3 Ozone depletion	No materials and components used requiring ozone depleting processes (100%)	80	0.8
EN 5.4 Recycled / reuse	% of materials and components (by weight) reused / from recycled sources	50	0.5
EN 5.5 Construction process	Volume / area of site disturbed during construction less than 2X volume/area of new building (100%)	100	1.0

Table 15.03 Environmental Building Performance

Heritage

According to the National Resources Heritage Act No 25 of 1999:

“Our heritage celebrates our achievements and contributes to redressing past inequities. It educates, it deepens our understanding of society and encourages us to empathise with the experience of others. It facilitates healing and material and symbolic restitution and it promotes new previously neglected research into our rich oral traditions and customs.”

The NHRA No 25 of 1999 (1) (3) determines when a place or object is culturally significant:

“A place or object is considered part of the national estate if it has cultural significance because of its importance to the community, or pattern of South Africa’s history, its possession of rare aspects of South Africa’s natural or cultural heritage, its strong or special association with a particular cultural group for social, cultural or spiritual reasons.”

In terms of the NHRA No 25 of 1999 the building is culturally significant for several reasons:

- Architecturally, the building is typical of synagogues built world-wide during the 1800s¹⁰
- The building is the first Synagogue to be built in Pretoria and tells of the strong Jewish community in Pretoria at that time
- Sammy Marx, a leading figure in Pretoria’s history at the time assisted the construction of the building.
- The Old Synagogue is on Paul Kruger Street (previously Market Street), which along with Church Street determines the inner city grid
- In 1952 the building was expropriated by the national government and converted into a supreme court designated to deal specifically with rising black opposition movements. It is here that in the 1950/60s Nelson Mandela and several co-accused were sentenced to imprisonment
- In the 1970s the inquest into the death of Steve Biko, leader of the Black Consciousness Movement, was held at the Old Synagogue
- Today the building is empty, symbolically bearing the wrath of South Africa’s violent undemocratic past

Project is to fall within guidelines for the interpretation and presentation of cultural heritage as described by the ICOMOS Charter. ^{10. Tzonis (2004:24)}



Urban Regeneration

In his article *Evolution, Definition and Purpose of Urban Regeneration*, Roberts¹¹ defines urban regeneration as:

“comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, social and environmental condition of an area that has been subject to change.”¹¹

In essence, urban regeneration can be seen as:

- “An interventionist activity
- An activity which straddles the public, private and community sectors
- An activity which is likely to experience considerable changes in its institutional structures over time in response to changing economic social, environmental and political circumstances
- A means of mobilizing collective effort and providing the basis for the negotiation of appropriate solutions
- A means of determining policies and actions designed to improve the condition of urban areas and developing institutional structures necessary to support the preparation of specific proposals”¹²

Proposal

From this summary it becomes clear that urban regeneration is a process that by nature requires team input. It also is clear that urban regeneration requires the modification and adjustment of current and future policies to suit individual situations. It is not a set formula that can be applied to cities world wide let alone cities within one country.

Due to the nature of this theoretical project it is impossible to have the degree of participation and input as is necessary for urban regeneration projects. Therefore the project will focus on physical and environmental regeneration and will from a lesser degree (hypothetically) address social and community issues as well as the economic and financial aspects of the process. Existing policies and the adaptation thereof during the process will not be addressed. (addressed indirectly) It is important due to current needs in the area, the political and architectural significance of

the site to address the heritage aspect and encourage activation of the space. Public art and architecture (both being design disciplines that deal with spatial and human interaction) will be investigated as a means of achieving this.

11. Roberts (2005:17)

12. Roberts (2005:22)



Survey Evaluation

The data of the evaluation has been emitted at this point in the baseline document as it has been included as an independant appendix within this dissertation. Refer to Appendix A for the results of the survey.

An informal survey of the two 'Backpacker' hostels in Pretoria was conducted by the author to establish what existing facilities in travel hostels are, what facilities are provided and positive and negative aspects from a management, location and tourism perspective. The results have been summarised in the following table.

The intention is to conduct the same survey with three 'Backpacker' hostels on Long Street in Cape Town. The youth hostels are said to have functioned as catalysts to Long Street by introducing activity which in turn attracted further investment. Long Street today is a vibrant and unique part of Cape Town, with many small businesses, bars and restaurants operating in the vicinity. This phenomenon offers a unique experience to the traveler and local resident in Cape Town.



Schedule of Accommodation

The schedule of accommodation has been emitted at this point in the baseline document as it has been included as an independent chapter within this dissertation.

Performance Criteria

In South Africa travel hostels, such as the Backpackers, are found in all cities and at all major holiday and tourist destinations across the country. In most cases the Backpackers are located within walking distances of natural and historical attractions (e.g. along beaches in the Eastern Cape; next to the Melrose House in Pretoria etc). Due to the nature of the accommodation provided, guests are usually budget travellers or young people seeking temporary accommodation during internships, study exchanges or other education related activities. Generally, the age range of Backpacker guests is between 18 and 35 years old. As cost is an issue, Backpacker and other hostels seldom are new builds. Often old residences, old houses and other buildings are converted for the new function which adds to the character of the place. For this reason it is difficult to make a comparison of the building type. Therefore, the comparison will fall somewhere between the guidelines set out for student residences and those for hotels, which most closely relates to the Backpacker accommodation.

User Profile

- **Luxury Penthouse Apartments**
Single/ married young professionals located close to work opportunities in city centre
- **Temporary Residential Accommodation**
NGOs and other commercial organisations and businesses can rent out small apartments within the building for visiting guests, researchers, trainees, etc that may be in Pretoria for an extended but temporary period of time. Lease agreements should range from 1 week - 3 months (renewable). Universities, technikons and other education-based organisations

would be encouraged to make use of this facility especially for exchange students, visiting lecturers and researchers where the cost of accommodation is a concern. All rooms will be equipped with a study area specifically for this purpose. The location of the building allows for easy accessibility to research and education facilities (such as the New National Library- currently under construction). This facility will also cater for families that may need accommodation for short periods of time.

- **Temporary Accommodation**

Short-term budget travellers (focus on tourism)

- **Other facilities**

To be used by local businesses and educational institutions in the area for conferences and exhibitions.

Retail and Recreational Facilities

Facilities Located on ground floor relating to main pedestrian movement and public space. This facility will include public toilets on the public square.

- **Below grade parking**

Access to parking from Struben Street as the vision for the city is to pedestrianise Paul Kruger Street. Parking will be available for guests as well as businesses in the area and visitors to the site. The vision includes the operation of a tram system along Paul Kruger street minimising the need for private transportation. Due to the existing nature of our cities, there will always be a demand for vehicular parking.

The building should be designed in such as way as to not limit accessibility. (i.e. all disabilities: visual, mobile and auditory)

Concerns and Deciding Factors

- Cost of accommodation (this may exclude penthouse apartments)
- Safety and security
- Access to facilities (academic, tourist and recreational)
- Comfort on a basic level (neat, natural light, hot water, clean communal facilities)
- Reasonable room size
- Self-catering Facilities
- Private bathrooms (especially for long-term guests and people that may be attending conference)
- Low noise level (work and study)

Characteristic of Building Type

According to the 'Oxbridge model', student accommodation functions best when social units of 5-6 students can be created. This size group functions best socially and reduces management problems. As the building is not student accommodation, these figures may not apply. Usually one staircase accommodates 4-10 students. Communal dining areas should allow for all students in one unit to eat at the same time. Spatial provision should be made for guests. Kitchens become the point for social interaction for students- more so than recreational spaces.

Security is a factor due to irregular hours kept by students (this may be similar for students and travellers).

Requirements⁶

- Kitchens (communal)
 - a 1 sink (two bowls) and 1 cooker (with 4 rings) serves max 5 Students (3 persons is preferable)
 - b Storage: 0.13m² refrigerator space/person
0.3m² of dry goods/ person (i.e. 1 shelf pp)
 - c Lockable cupboard/ person
 - d Task and general lighting
 - e Min 3 sockets for appliances
 - f Minimum total length of work surface including cooker 3600mm
 - g Circulation space between units: 1200mm
 - h Duplication may be necessary to accommodate the disabled
- Bathrooms (communal)
 - a 1 WC, 1WHB and 1 bath/shower per 5 students (3 persons is preferable)
 - b WC should be separate from bathroom (if only one WC)
 - c If WHB in individual rooms, WC and other amenities not more than 1 floor or 30m away
- Room Areas
 - a Bedroom (1 person): min 6.5m²; (2 persons): min 10.2m²
 - b Min width of room: 2.5m² (this allows for a full turning circle for wheelchair users: diameter 1500mm)
 - c Kitchen and dining area (if in individual unit): min 6.5m²
 - d Spaces must be flexible to accommodate different functions
 - e En-suite bathrooms: min 2.5m²
 - f Sound insulation: 40dB is appropriate (avoid noise from inside and outside e.g. stairways and service ducts)
- Hotel Room Areas
 - a **: 20-22m²
 - b ***: 25-27m²
 - c ****: 30-34m²
 - d *****: min 36m²

13. Adler (1999: Part 36)



• Standard Furniture

- a Bed: 900x2000mm (doubles as sofa) ; bedside table (optional)
- b Desk 700x1800)
- c Drawers 800mm wide
- d Wardrobe: full height hanging space min 600x900mm with lockable space
- e Shelving: 300x3600mm (total run)
- f Easy chair (reading)
- g Desk chair
- h Washbasin (in cupboard)
- i All bathrooms to have shaver point (unisex), mirrors and task lighting

• Disabled considerations

- a Accommodate full turning circle 1500mm
- b Desk height 760mm
- c Shelving 700-1300mm above floor level
- d Sockets, switches and ironmongery at 1000mm
- e Sinks to clear 760mm above floor level
- f Bold colours for partially sighted
- g Door openings min 900mm

Unit Comparison

	Hostels	Hotels	Flats
Kitchens:	Fully equipped and communal, if provided	-	Dining kitchen: 1-3 persons: 8-10m ² Galley kitchen: 1-3 persons 5.5-6.5m ²
Living area	Communal living area with TV	Hotel lobby and lounge area within hotel room (size dependant on rating)	With dining kitchen: 1-3 persons: 11-13m ² With galley kitchen: 1-3 persons: 13-16m ²
Main Bedroom	Dormitories (range in size and no of guests Double rooms usually available at a higher cost)	2 Star: 20-22m ²	1-3 persons: 9-12m ²
Double Bedroom		3 Star: 25-27m ²	Only for >4 persons
Single Bedroom		4 Star: 30-34m ² 5 Star: min 36m ² (single rooms uncommon)	1-2 persons: 8-9m ²
Bathrooms	Communal (often unisex) Often en-suite bathrooms with double rooms (at additional cost)	En-suite	1-3 persons: 1 x WC (may be in bathroom) 4-5 persons: 1 x WC (must have separate compartment)
Storage	To store backpack (often under bed or locker)	Built-in full hanging height cupboard (valuables safe common in room)	
Linen	Usually provided (guests own sleeping bags sometime required)	Fully services	1-3 persons: 0.4m ³ 4 persons: 0.6m ³
Walk-in general store	Often communal room with lockers for guests	-	1/ unit
Service:	basic	Fully serviced (extent of service dependant on rating)	self

Table 15.04 Unit Comparison

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thank you to: nico my parents thornton my savior for the support the love the encouragement the ability

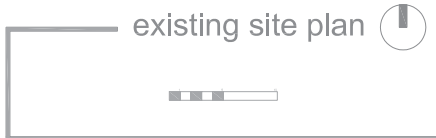
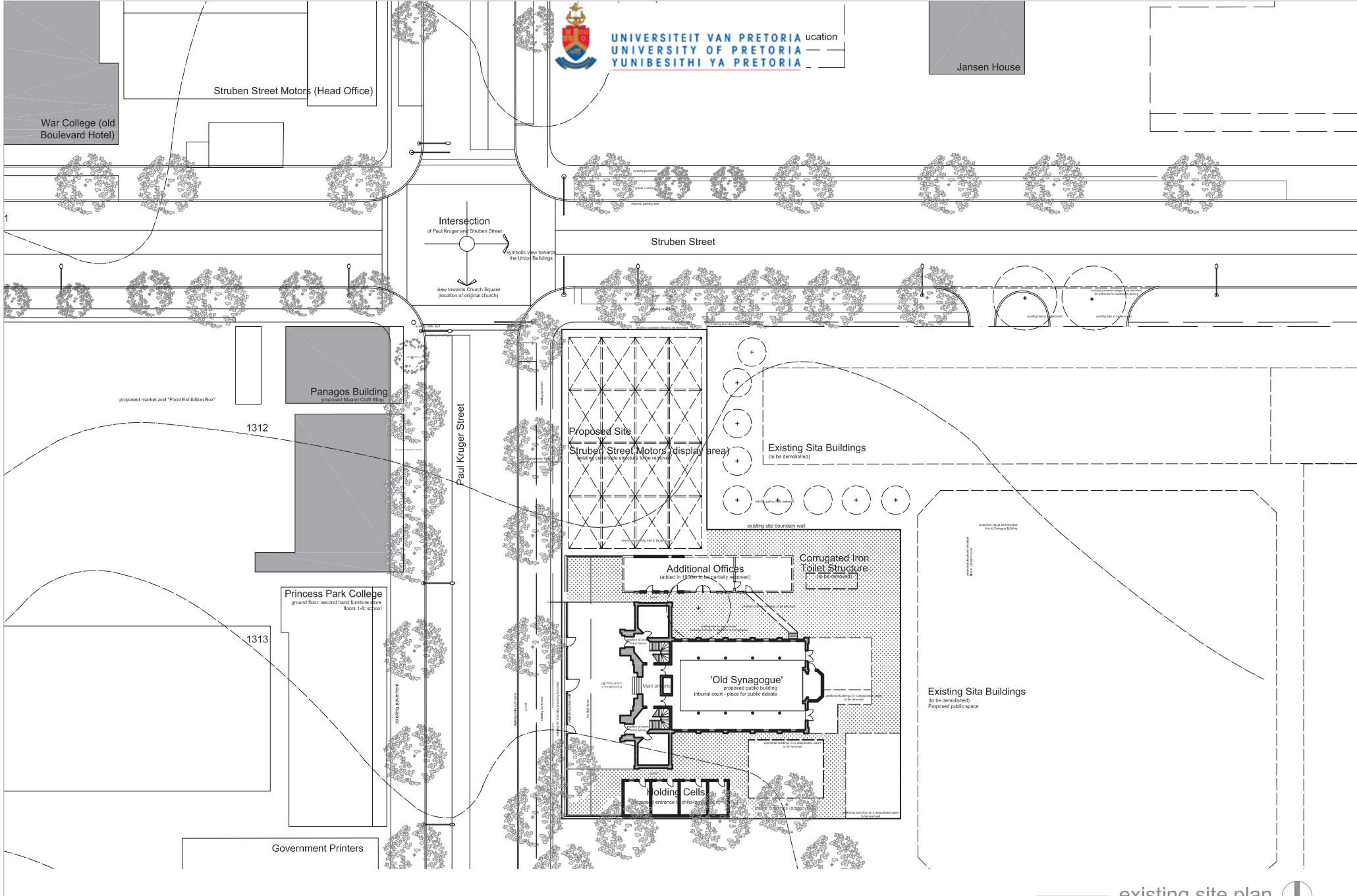


Figure 12.46 Existing site plan



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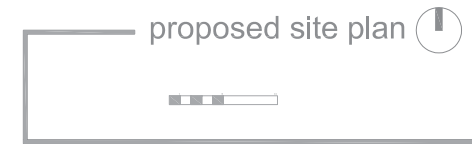
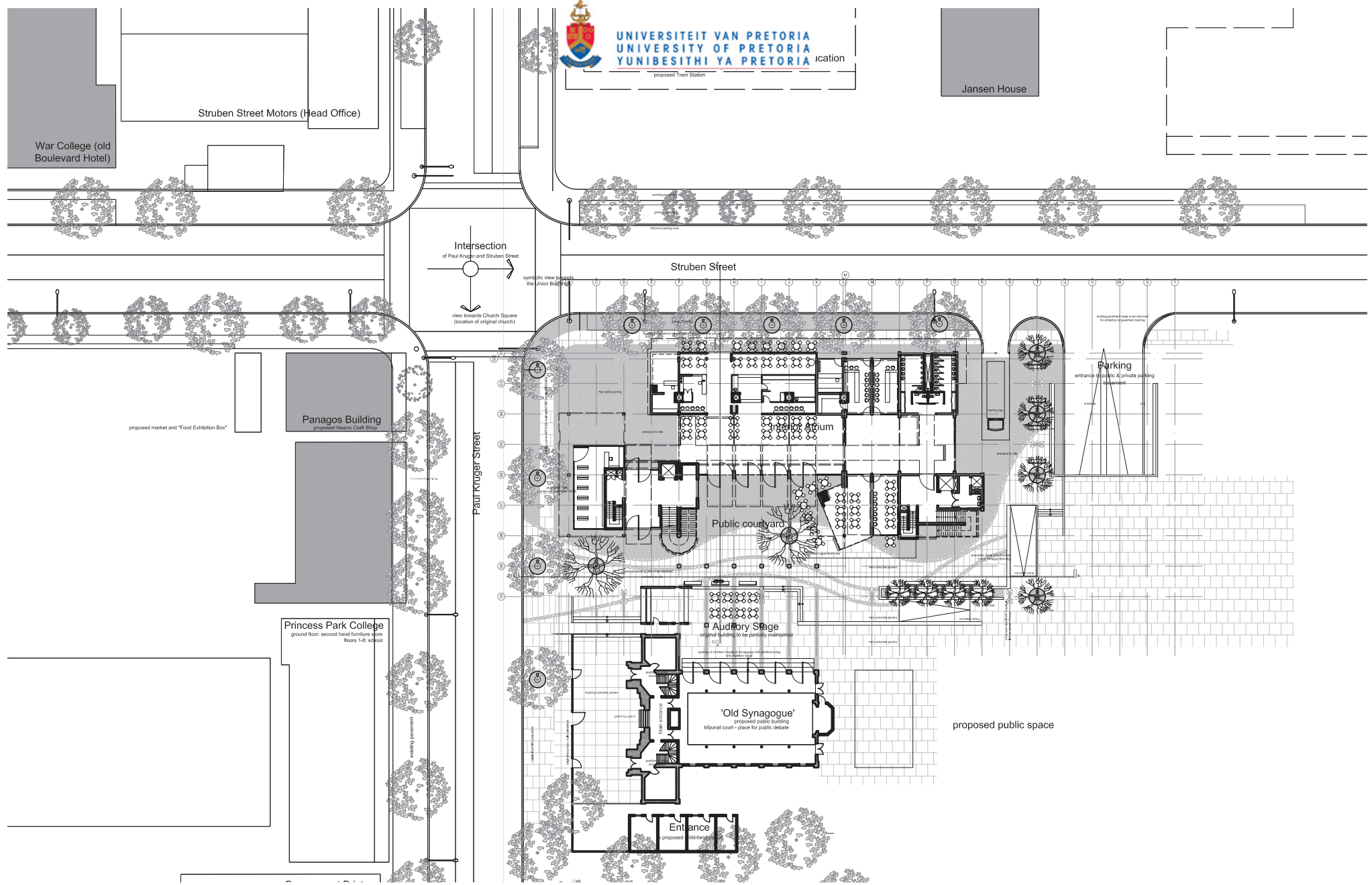
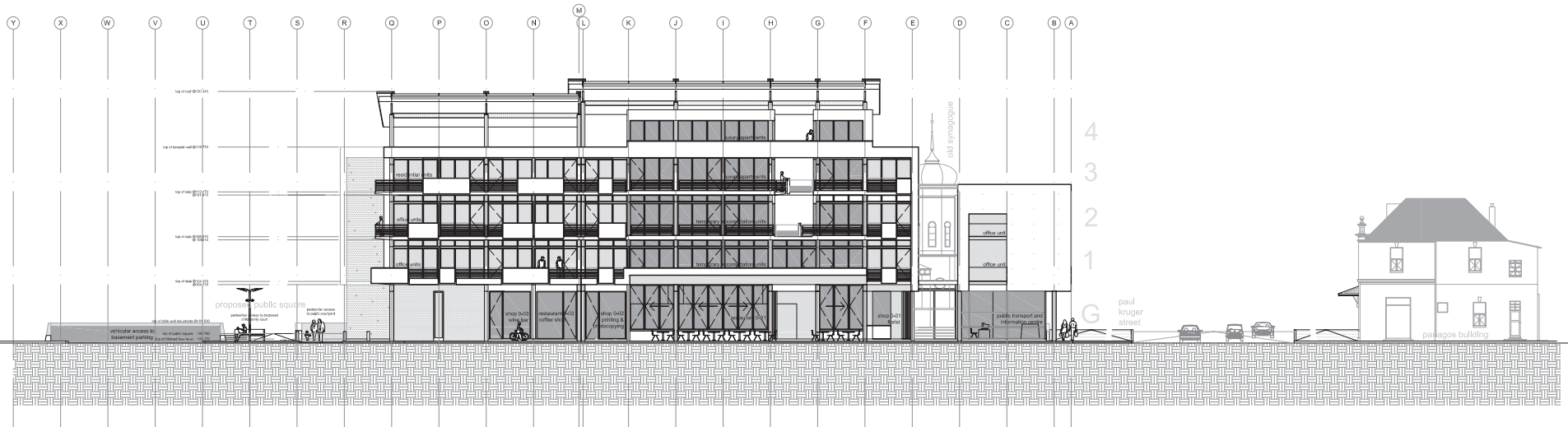


Figure 12.47 Proposed site plan



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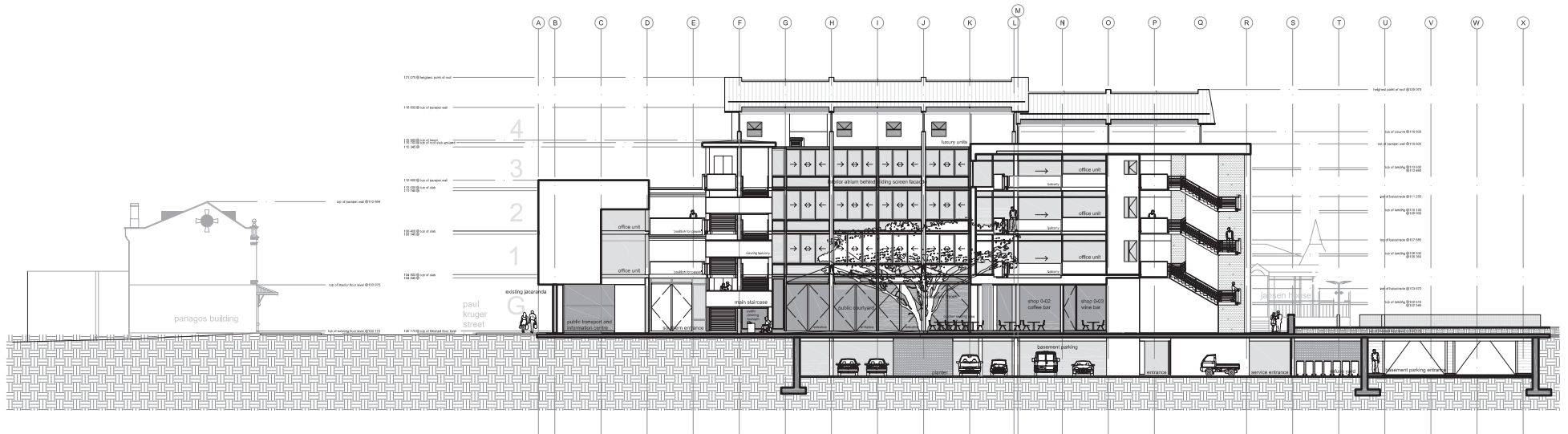


northern elevation of site
scale 1:500

Figure 12.48 Northern elevation of site



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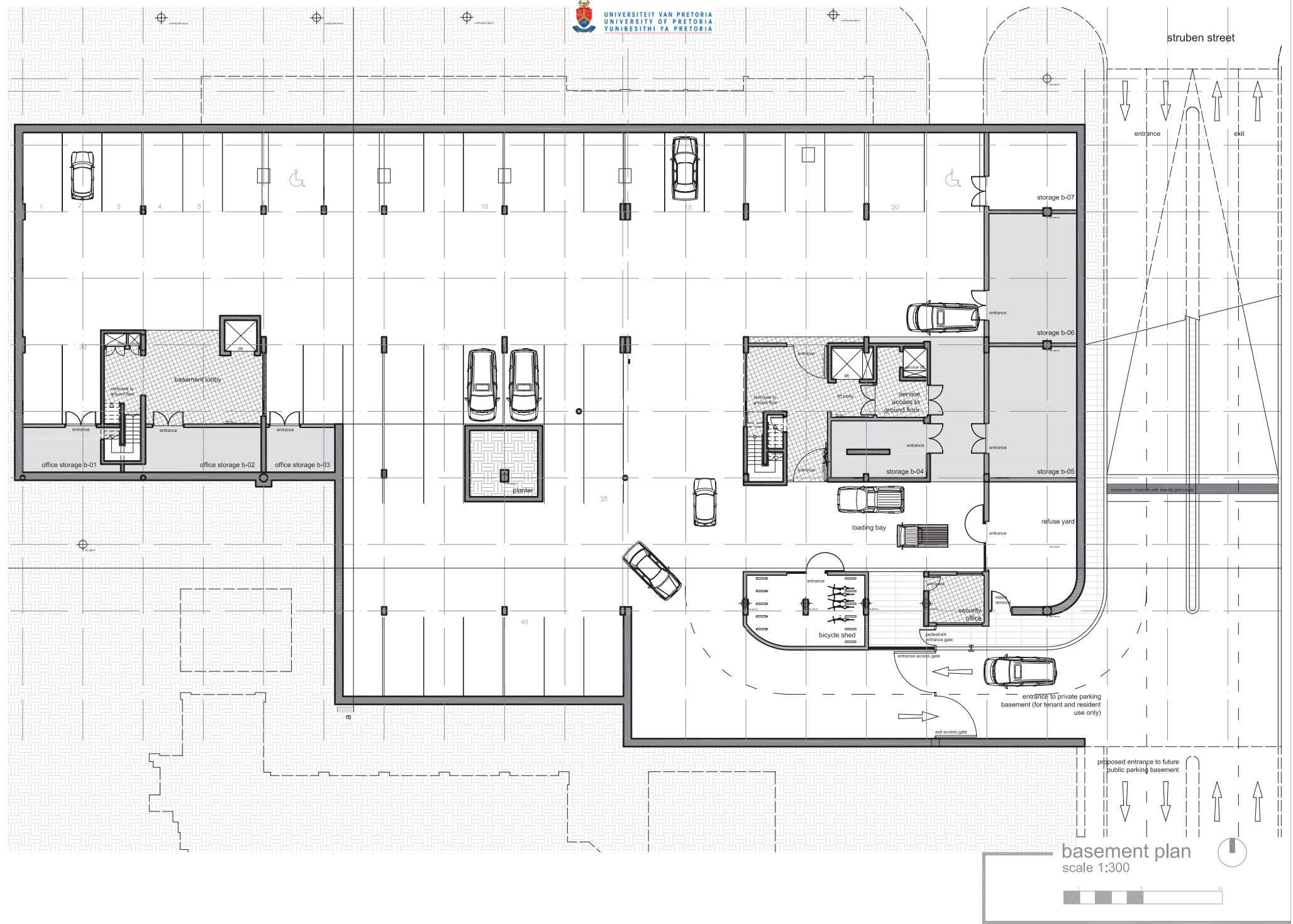


southern elevation of site
scale 1:500

Figure 12.49 Southern elevation of site



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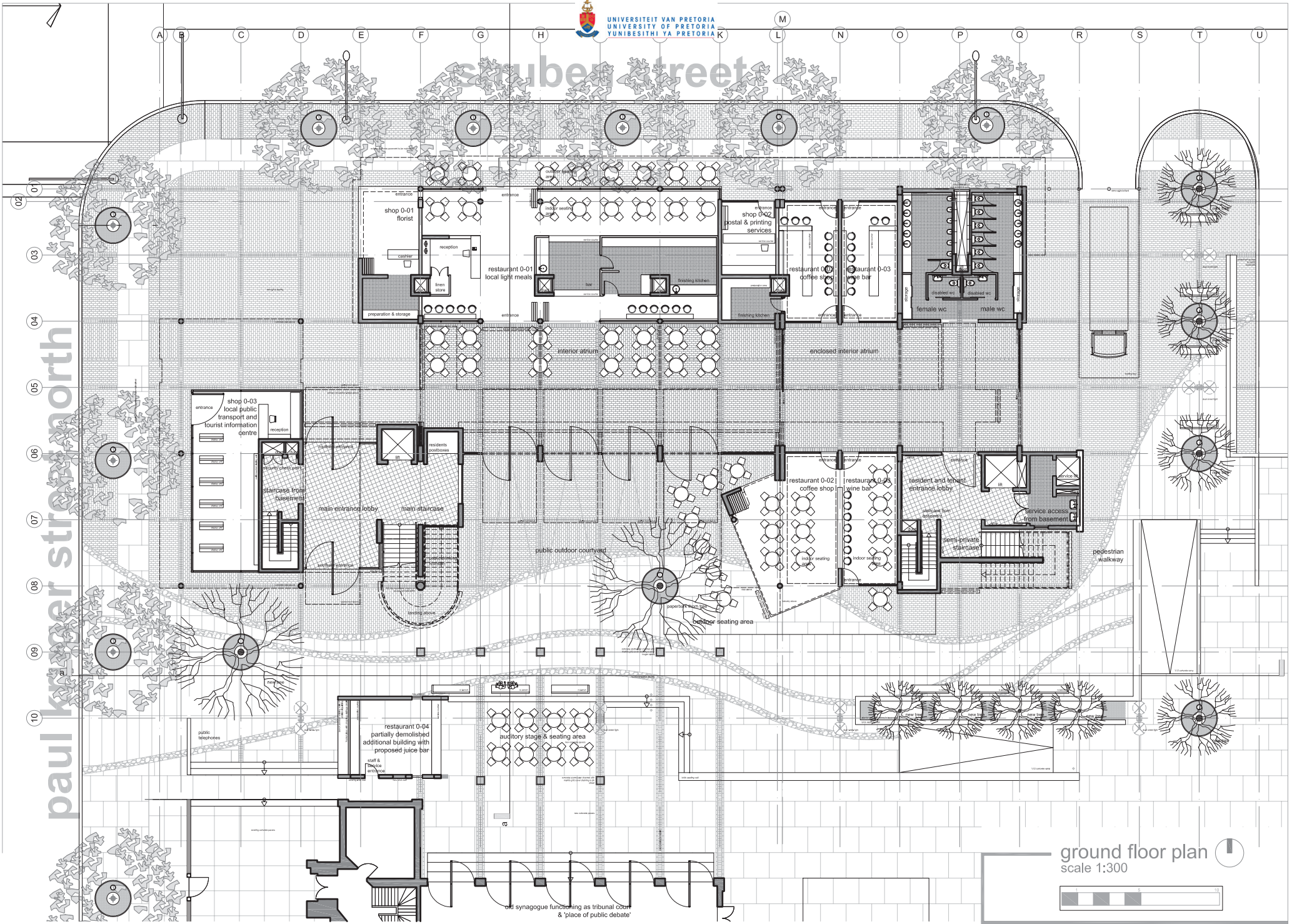


basement plan
scale 1:300

Figure 12.50 Basement plan

struben street

paul kruger street north



ground floor plan
scale 1:300

Figure 12.51 Ground floor plan

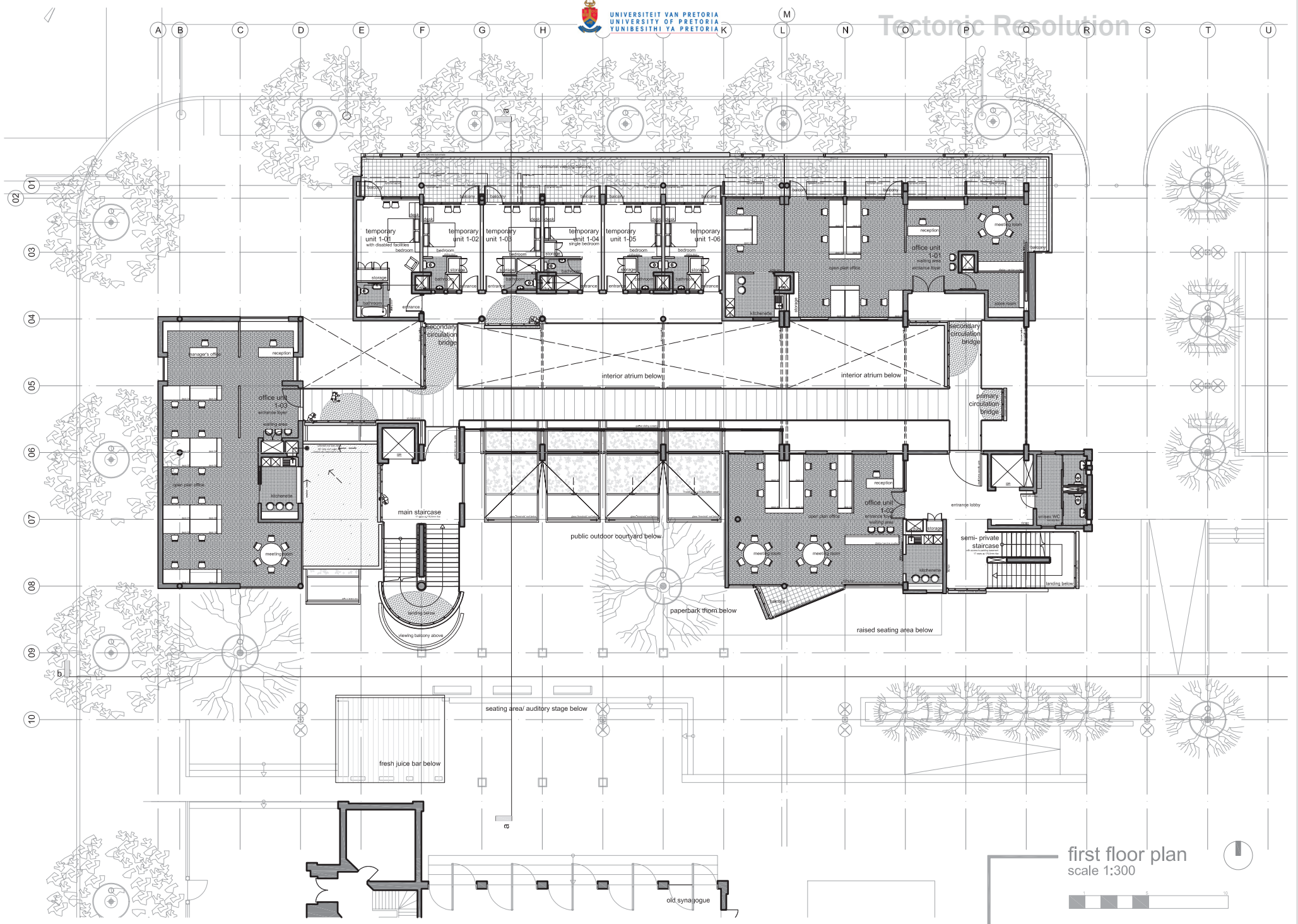
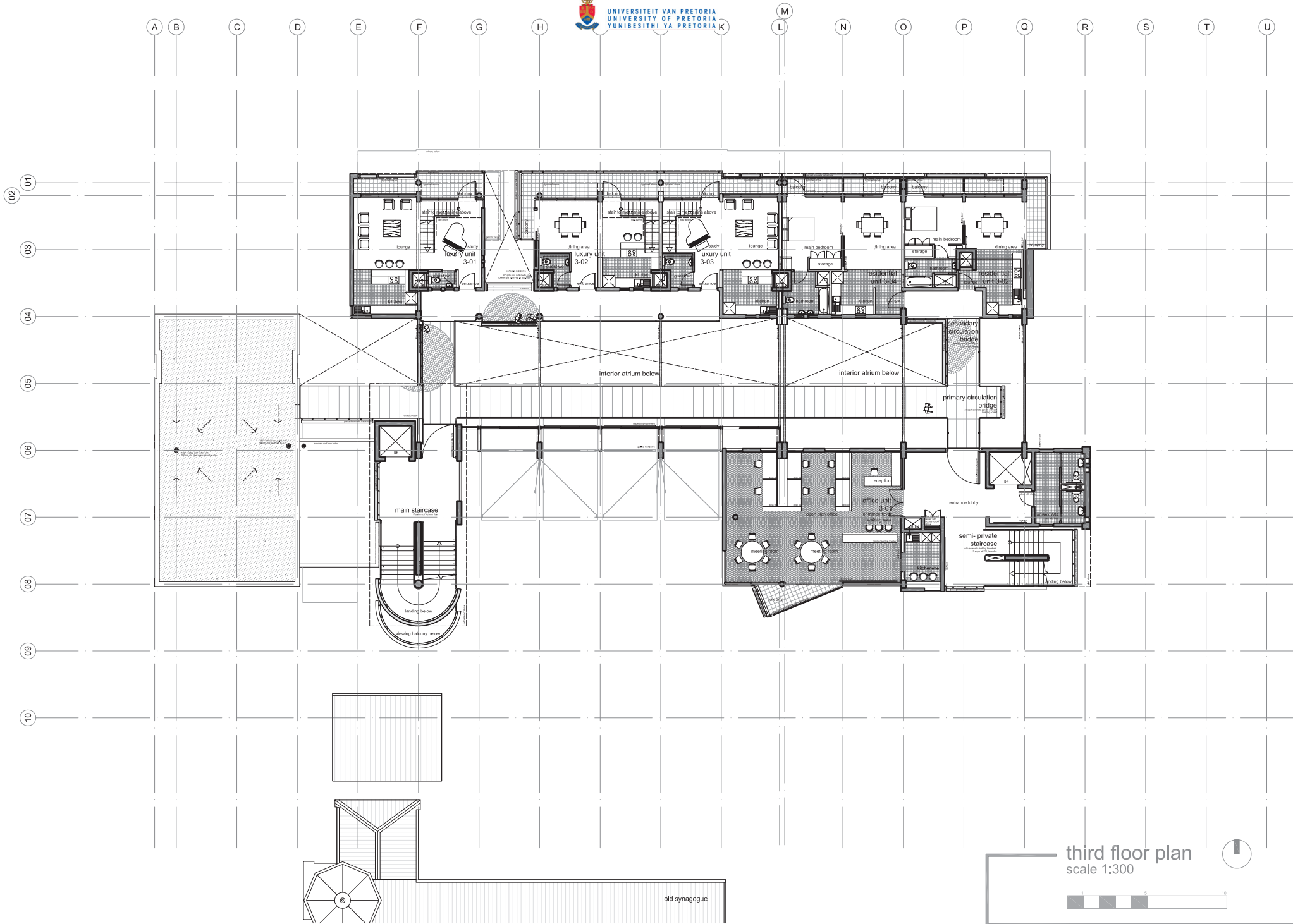
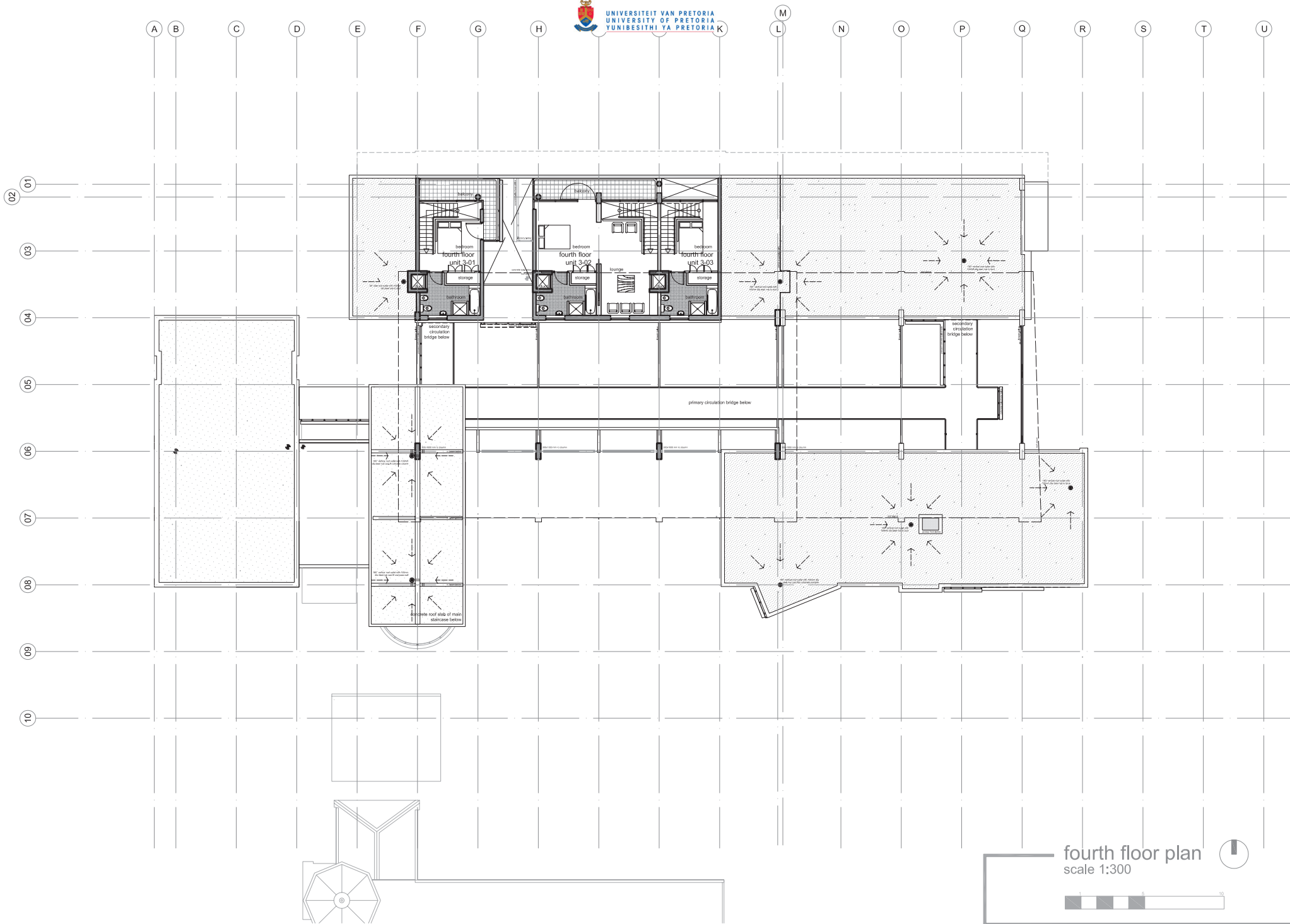


Figure 12.52 First floor plan



third floor plan
scale 1:300

Figure 12.53 Third floor plan



fourth floor plan
scale 1:300

Figure 12.54 Fourth floor plan



A B C D E F G H K L M N O P Q R S T U

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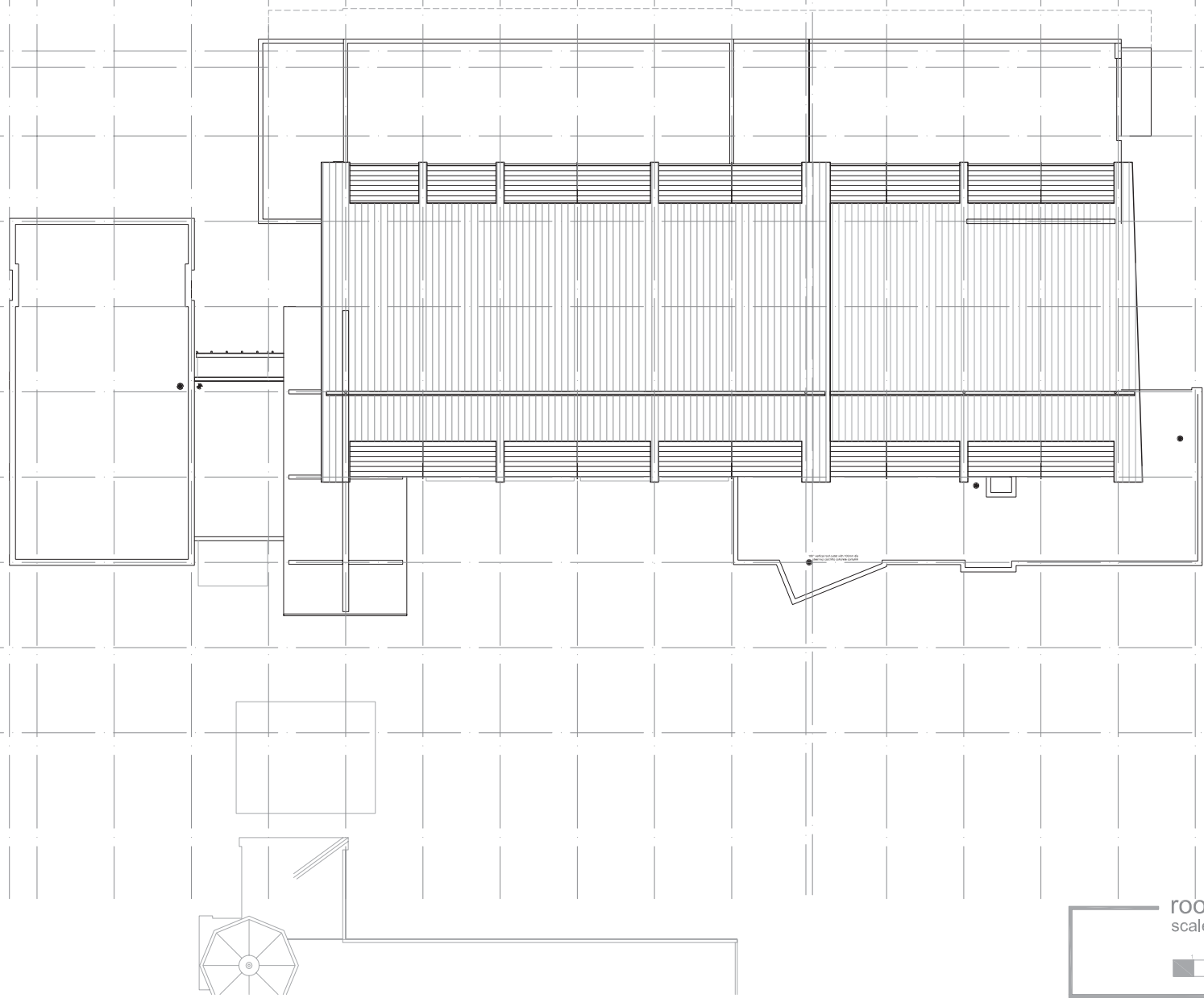
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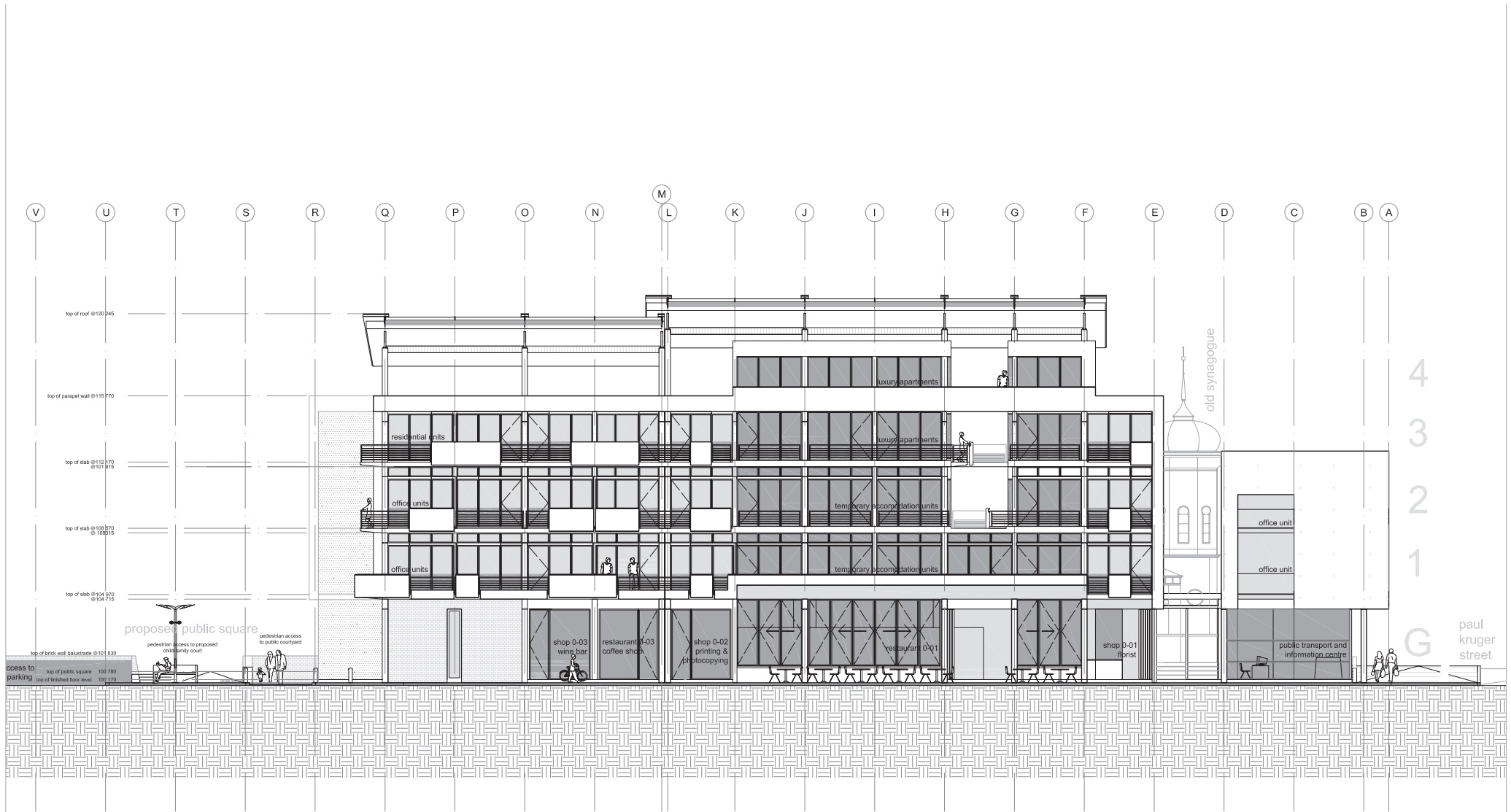
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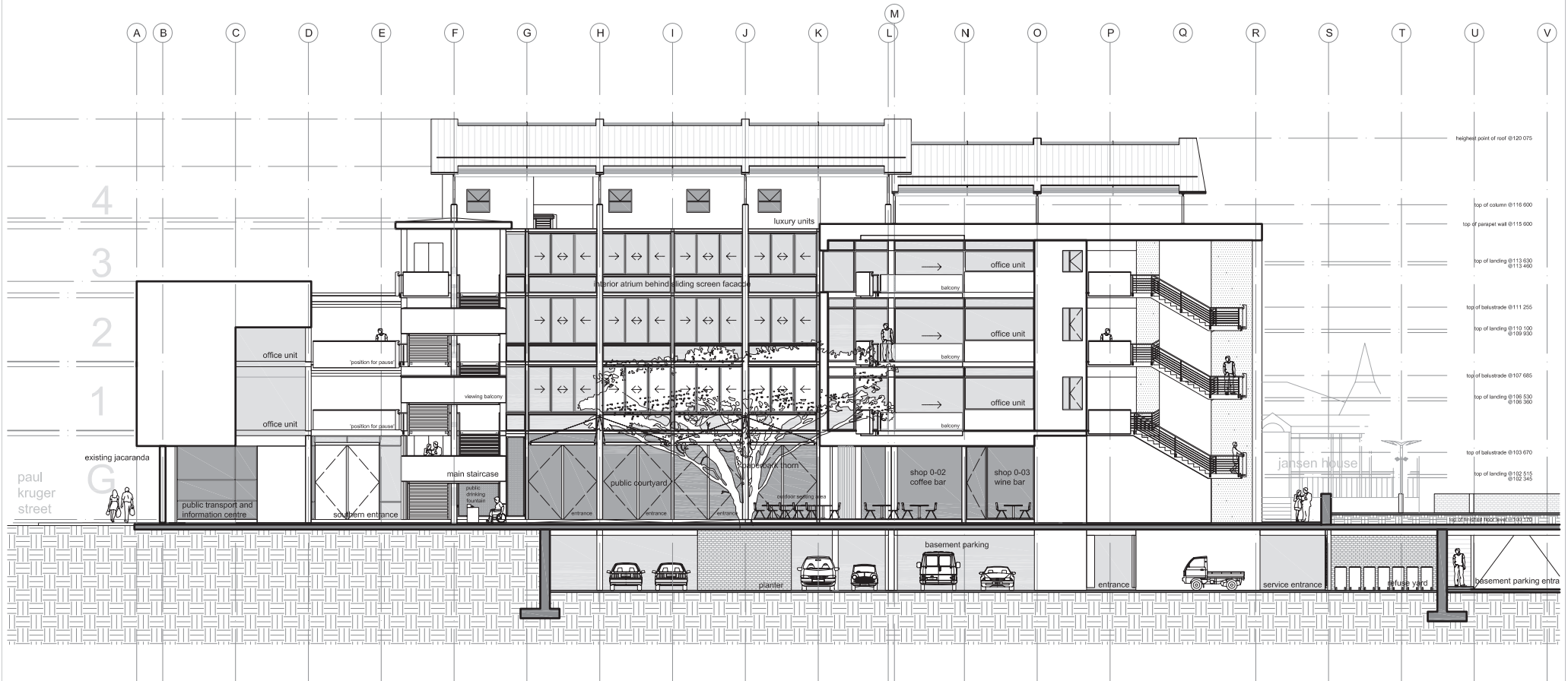
roof plan
scale 1:300

Figure 12.55 Roof plan



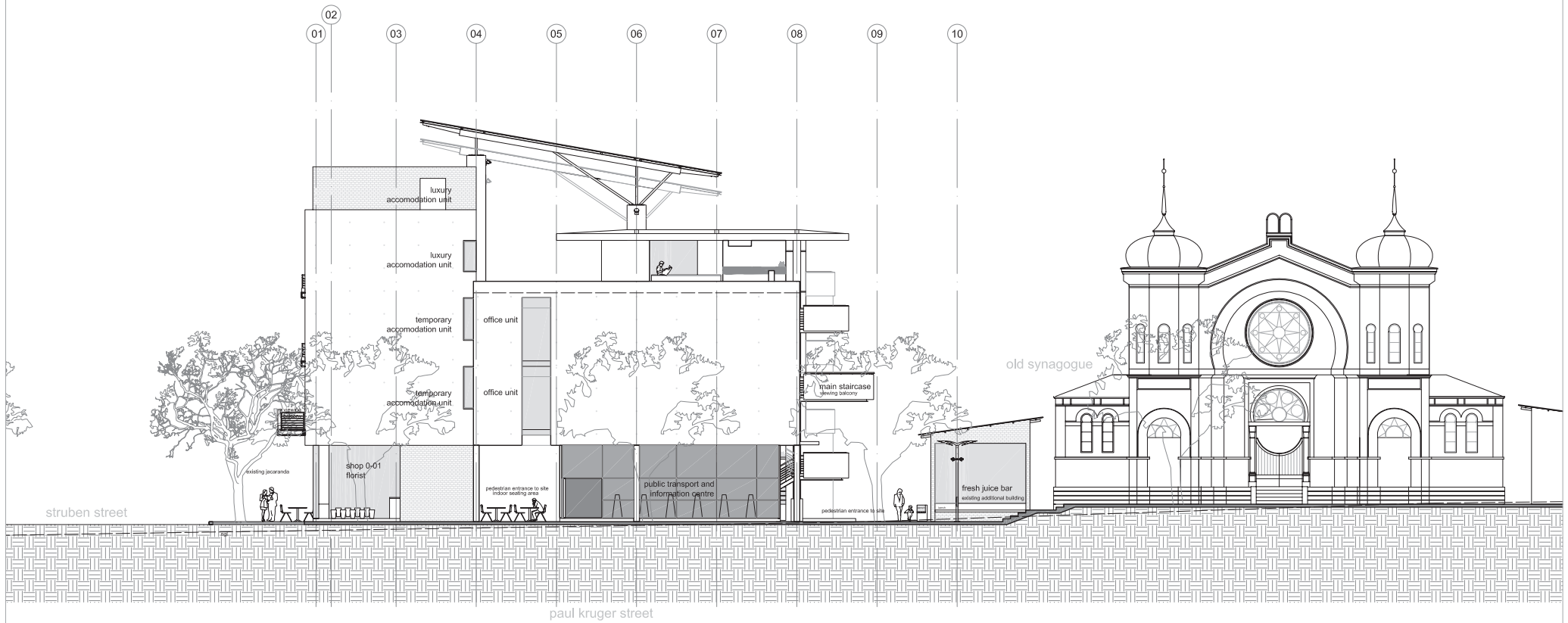
northern elevation
scale 1:300

Figure 12.56 Northern Elevation



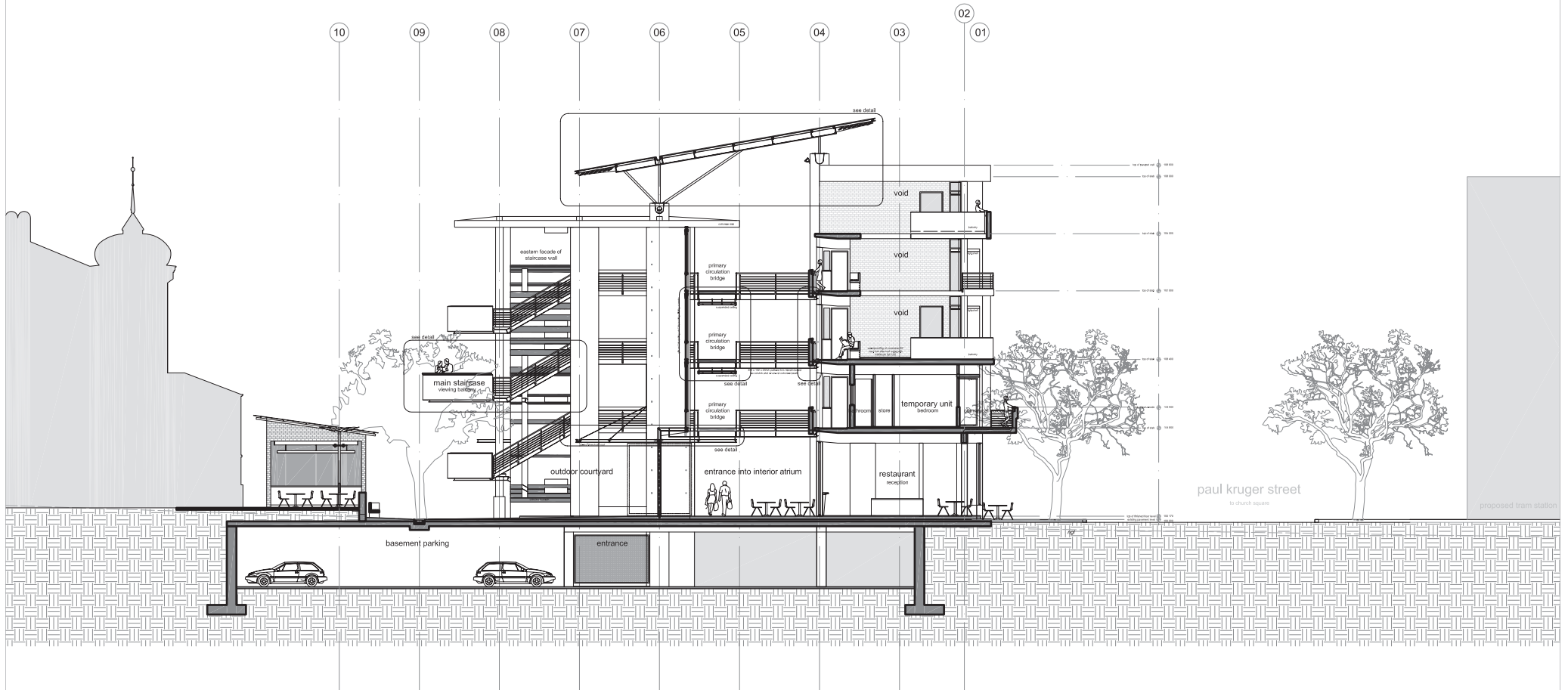
southern elevation
scale 1:300

Figure 12.57 Southern Elevation



western elevation
scale 1:300

Figure 12.58 Western Elevation



section aa
scale 1:300

Figure 12.59 Section

