

# reclaiming lost space

A centre for sports and education development in the Pretoria city centre

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## Contents

1	Introduction	1.01	7 Building design development	7.01
2	Theoretical context	2.01	7.1 Introduction	7.02
	2.1 Introduction	2.02	7.2 A sense of community	7.02
	2.2 Sport and the community	2.02	7.3 Building edge and entrance	7.03
	2.3 The role of sports administration	2.06	7.4 The Kunsthall	7.04
	2.4 Architecture of the event	2.06	7.5 Architecture of transition	7.05
	2.5 The intervention at an urban scale	2.08	7.6 The viewing platform	7.08
3 Brief		3.01	7.7 A question of identity	7.12
	3.1 Problem Statement	3.02	7.8 Pretoria and the Modern	7.12
	3.2 Sub Problems	3.02	7.9 Integrating the modern	7.14
	3.3 The intervention	3.03	7.10 Adding a new layer	7.16
4 Context Analysis		4.01	7.11 Symbolism	7.17
	4.1 Introduction	4.02	7.12 Including the layer in the intervention	7.18
	4.2 The development at a macro scale	4.04	7.13 Programme	7.20
	4.3 The development at a meso scale	4.05	8 Technical investigation	8.01
	4.4 Opportunities and threats	4.06	8.1 Structure	8.02
	4.5 Users	4.07	8.2 Materials	8.03
	4.6 Extending the pedestrian network	4.08	8.3 Services	8.04
	4.7 The development at a micro scale	4.12	8.4 Circulation	8.04
	4.8 Street conditions	4.13	8.5 Lighting	8.04
	4.9 Proposed new developments in the class framework	4.14		
	4.10 Sheperd Street	4.15		
	4.11 Historical Context	4.16		
	4.12 Current on-site activities	4.18		
	4.13 Conclusion regarding on-site buildings	4.20		
5 Precedent Studies		5.01		
	5.1 Precedent study 1	5.02		
	5.2 Precedent study 2	5.04		
	5.3 Precedent study 3	5.06		
	5.4 Precedent study 4	5.08		
	5.5 Precedent study 4	5.10		
6 Urban Design Development		6.01		
	6.1 Introduction	6.02		
	6.2 Lessons from the Piazza di San Marco	6.04		
	6.3 Jacobs and Newman	6.06		
	6.4 Louw and Noero	6.08		

## List of figures

Figure 1.1 Streets and sidewalks are dominated by cars (Karsten Hansen)	1.02	Figure 5.11 An unorthodox performance (Levin, A p.8)	5.04
Figure 1.2 Streets are appropriated as public space (Karsten Hansen)	1.03	Figure 5.12 The building provides natural climbing walls (Brandolini, S p. 76)	5.06
Figure 1.3 Streets are appropriated as public space (Karsten Hansen)	1.03	Figure 5.13 Openings are cut (Brandolini, S p. 76)	5.06
Figure 1.4 Carwash in the streets(Karsten Hansen)	1.03	Figure 5.14 Trees are used to define walkways (Brandolini, S p. 78)	5.07
Figure 1.5 A Vendor selling her wares (Karsten Hansen)	1.03	Figure 5.15 The history behind the building is apparent (Brandolini, S p. 76)	5.07
Figure 2.1 Zanele Situ (Baker, K)	2.03	Figure 5.16 The reprogrammable public square (Brandolini, S p. 77)	5.07
Figure 2.2 Steve 'Kalamazoo' Mokone (Baker, K)	2.03	Figure 5.17 A study of the façade (Karsten Hansen)	5.08
Figure 2.3 Basil D'Oliviera(Baker, K)	2.03	Figure 5.18 The strong sense of rhythm (Deckler, T et. al p. 78)	5.08
Figure 2.4 Sport as an event (Van Berkel, B & Bos, p.55)	2.03	Figure 5.19 Pretoria vernacular (Deckler, T et. al p. 79)	5.08
Figure 2.5 An urban sports park in Rotterdam ( De Vidy, C)	2.04	Figure 5.20 A play of planes and volumes (Deckler, T et. al p. 76)	5.08
Figure 2.6 Expression on the field ( De Vidy, C)	2.04	Figure 5.21 The entrance (Karsten Hansen)	5.08
Figure 2.7 Social interaction ( De Vidy, C)	2.04	Figure 5.22 View from the building (Karsten Hansen)	5.08
Figure 2.8 Social Interchange ( De Vidy, C)	2.04	Figure 5.23 Lounge on the top floor (Deckler, T et. al p. 79)	5.09
Figure 2.9 Space for the individual ( De Vidy, C)	2.05	Figure 5.24 The building in its sporting environment (Karsten Hansen)	5.09
Figure 2.10 Sport as a cultural bridge builder ( De Vidy, C)	2.05	Figure 5.25 The building protrudes (Karsten Hansen)	5.10
Figure 2.11 Sport as a cultural bridge builder ( De Vidy, C)	2.05	Figure 5.26 Using perforated plates to play with light (Karsten Hansen)	5.10
Figure 2.12 Sport creates community (Van Berkel, B & Bos p.55)	2.05	Figure 5.27 Strong rhythmic columns and appearance(Deckler, T et. al p. 24)	5.11
Figure 2.13 Architecture of the Fanfest, Germany 2006 (Baker, K)	2.07	Figure 5.28 Materials and structure are evident (Deckler, T et. al p. 24)	5.11
Figure 2.14 A reprogrammable square (Brandolini, B p. 77)	2.07	Figure 5.29 Rugged steel corner treatment(Karsten Hansen)	5.11
Figure 2.15 Stadium Rotterdam, Holland (Van Berkel, B & Bo, p.58)	2.07	Figure 5.30 Perforated plate details (Karsten Hansen)	5.11
Figure 2.16 Diagram depicting the relationship (Van Berkel, B & Bos p.59)	2.07	Figure 5.31 Perforated plate details (Karsten Hansen)	5.11
Figure 4.1 The geographics of Pretoria(Jordaan, G p.16)	4.02	Figure 6.1 Sport combined (Powell, P p. 12)	6.02
Figure 4.2 Highspeed thoroughfare - Struben Street (Karsten Hansen)	4.02	Figure 6.2 Sport combined (Powell, P p. 12)	6.02
Figure 4.3 Vibrancy of the streets, a hat vendor (Karsten Hansen)	4.02	Figure 6.3 Study of a public precinct (Karsten Hansen)	6.03
Figure 4.4 Safety is an issue (Karsten Hansen)	4.02	Figure 6.4 Study of a public precinct (Karsten Hansen)	6.03
Figure 4.5 Prinsloo Street covered walkways (Karsten Hansen)	4.03	Figure 6.5 The Piazza di San Marco (Karsten Hansen)	6.04
Figure 4.6 Buildings are closed off (Karsten Hansen)	4.03	Figure 6.6 Study of the plan of Piazza di San Marco (Karsten Hansen)	6.04
Figure 4.7 Ill-defined dead spaces are scars (Karsten Hansen)	4.03	Figure 6.7 Analysis of lost space in the city block (Karsten Hansen)	6.04
Figure 4.8 Struben Street - dirty and wet (Karsten Hansen)	4.03	Figure 6.8 Open space (Karsten Hansen)	6.04
Figure 4.9 The greater Pretoria context, scale 1:30000 (Karsten Hansen)	4.04	Figure 6.9 Shepherd Street (Karsten Hansen)	6.04
Figure 4.10 The city and vehicles, scale 1:5000 (Karsten Hansen)	4.05	Figure 6.10 Exploring visuals (Karsten Hansen)	6.05
Figure 4.11 The Tshwane inner city (City of Tshwane)	4.06	Figure 6.11 The six s's (Brand, S p. 26)	6.06
Figure 4.12 Analysis of pedestrian routes (Karsten Hansen)	4.07	Figure 6.12 Drawing exploring increased permeability (Karsten Hansen)	6.06
Figure 4.13 Diagram depicting on-site agents (Karsten Hansen)	4.07	Figure 6.13 Version 1 - concept site plan (Karsten Hansen)	6.06
Figure 4.14 The city and the pedestrian, scale 1:5000 (Karsten Hansen)	4.09	Figure 6.14 Version 1 - Exploring permeability (Karsten Hansen)	6.06
Figure 4.15 The city block and its immediate context (Karsten Hansen)	4.10	Figure 6.15 Exploring building and site program (Karsten Hansen)	6.07
Figure 4.16 Site and boundary conditions, scale 1:1000 (Karsten Hansen)	4.12	Figure 6.16 Exploring routes that serve (Karsten Hansen)	6.08
Figure 4.17 Pretoria aerial photo (Afrikana)	4.17	Figure 6.17 Conceptual drawing of active urban edge (Karsten Hansen)	6.08
Figure 4.18 Diagram depicting current density (Karsten Hansen)	4.17	Figure 6.18 Usasaza Secondary School (Karsten Hansen)	6.08
Figure 5.1 Passive surveillance (Slessor, C p. 71)	5.02	Figure 6.19 Usasaza Secondary School elevation (Karsten Hansen)	6.08
Figure 5.2 Optimum use of glass facades (Slessor, C p. 71)	5.02	Figure 6.20 Analysis of background (Karsten Hansen)	6.09
Figure 5.3 The underground sports hall (Slessor, C p. 70)	5.03	Figure 6.21 Vital connections to surrounding urban elements(Karsten Hansen)	6.09
Figure 5.4 The building provides identity (Slessor, C p. 71)	5.03	Figure 6.22 The site is off limits to vehicles (Karsten Hansen)	6.09
Figure 5.5 Well-defined entrances and boundaries (Deckler, T et. al p. 26)	5.04	Figure 6.23 Perspective of existing (Karsten Hansen)	6.10
Figure 5.6 The Drill in its urban context (Deckler, T et. al p. 26)	5.04	Figure 6.24 Intervention - 9am, March/September 21 <sup>st</sup> (Karsten Hansen)	6.10
Figure 5.7 The Drill Hall (Deckler, T et. al p. 26)	5.04	Figure 6.25 Intervention - 12am, March/September 21 <sup>st</sup> (Karsten Hansen)	6.10
Figure 5.8 Layers of architecture (Deckler, T et. al p. 27)	5.04	Figure 6.26 Intervention - 3pm, March/September 21 <sup>st</sup> (Karsten Hansen)	6.10
Figure 5.9 Glass facades (Deckler, T et. al p. 28)	5.04	Figure 6.27 Perspective after intervention (Karsten Hansen)	6.11
Figure 5.10 A performance to viewers in flat buildings(Levin, A p.8)	5.04	Figure 6.28 Before intervention - scale 1 : 2500 (Karsten Hansen)	6.11

Figure 6.29 After intervention - scale 1: 2500 (Karsten Hansen)	6.12
Figure 7.1 First conceptual drawing (Karsten Hansen)	7.02
Figure 7.2 Diagram illustrating the positioning (Karsten Hansen)	7.03
Figure 7.3 Kunsthall at street level (Koolhaas, R. & Mau p. 440)	7.04
Figure 7.4 Street Elevation (Koolhaas, R. & Mau p. 440)	7.04
Figure 7.5 Transition to the park (Koolhaas, R. & Mau p. 446)	7.04
Figure 7.6 Diagram of the Kunsthall (Koolhaas, R. & Mau p. 440)	7.04
Figure 7.7 Diagram illustrating the concept (Karsten Hansen)	7.05
Figure 7.8 Exploring the form of the building as inviting (Karsten Hansen)	7.05
Figure 7.9 Model exploring the concept of transition (Karsten Hansen)	7.05
Figure 7.10 Diagram of (Karsten Hansen)	7.05
Figure 7.11 Sketch depicting the building (Karsten Hansen)	7.06
Figure 7.12 The building explored as a viewing platform (Karsten Hansen)	7.08
Figure 7.13 Views onto the public precinct (Karsten Hansen)	7.08
Figure 7.14 Exploration of building mass (Karsten Hansen)	7.08
Figure 7.15 Stadium typology of Sumo wrestling (Van Berkel, B & Bos, p.55)	7.09
Figure 7.16 Squash in Egypt (Van Berkel, B & Bos, p.56)	7.09
Figure 7.17 Model exploring the building (Karsten Hansen)	7.10
Figure 7.18 Drawing exploring the building (Karsten Hansen)	7.11
Figure 7.19 Transvaal Provincial Administration Building (Gerneke, G p.228)	7.12
Figure 7.20 Pretoria brick vernacular (Fisher, R.C p.147)	7.12
Figure 7.21 Meat Board building (Gerneke, G p.228)	7.12
Figure 7.22 College of Nursing, Pretoria, 1965 (Gerneke, G p.227)	7.13
Figure 7.23 High Performance Centre (Karsten Hansen)	7.13
Figure 7.24 Exploring the building masses and geometry (Karsten Hansen)	7.14
Figure 7.25 Drawing showing the response (Karsten Hansen)	7.14
Figure 7.26 Study of forces (Karsten Hansen)	7.14
Figure 7.27 Study of street elevation (Karsten Hansen)	7.14
Figure 7.28 Study of Brise Soleil shading elements (Karsten Hansen)	7.14
Figure 7.29 Perspective drawing of glazing in the street façade (Karsten Hansen)	7.15
Figure 7.30 Perspective drawing, showing the auditorium (Karsten Hansen)	7.15
Figure 7.31 Facade study of the defined auditorium (Karsten Hansen)	7.15
Figure 7.32 Frankfurt Museum, Richard Meyer, 1985 (Murray, P p.24)	7.16
Figure 7.33 Appearance of the towers (Karsten Hansen)	7.16
Figure 7.34 The central tower (Karsten Hansen)	7.16
Figure 7.35 West elevation study (Karsten Hansen)	7.17
Figure 7.37 The materials of the horizontal box (Karsten Hansen)	7.17
Figure 7.36 Section through the light box (Karsten Hansen)	7.17
Figure 7.38 Concept of the horizontal box (Karsten Hansen)	7.18
Figure 7.39 Study of the lightweight construction (Karsten Hansen)	7.18
Figure 7.40 Study of the flow of forces through the structure (Karsten Hansen)	7.18
Figure 7.41 Exploring sun angles and the elevation (Karsten Hansen)	7.18
Figure 7.42 Structural system of the box (Karsten Hansen)	7.19
Figure 7.43 Section through the box (Karsten Hansen)	7.19
Figure 7.44 Three dimensional representation of the box (Karsten Hansen)	7.19
Figure 7.45 Plan of horizontal box (Karsten Hansen)	7.19
Figure 8.1 Diagram of the structural system of the building (Karsten Hansen)	8.03
Figure 8.2 View from Struben street (Karsten Hansen)	8.05
Figure 8.3 View from the public space (Karsten Hansen)	8.05

# Chapter 1 - Introduction

## **Abstract**

The dissertation considers contemporary theory with regards to unprogrammed space and the impact of such space on the urban environment. The intrinsic relationship between programmed and unprogrammed space is defined, resulting in a formal translation in terms of an architectural intervention.

Lost space is the evidence of inept urban planning and this study attempts to reintegrate an entire city block into the urban fabric of the city. The exploration of a new programme into the area, takes the form of a sports and education facility in an urban park.

The final proposal creates a place of relief in the city, with Pretoria's inherent vernacular used as a generator of form. The design unifies a disparate community by using sport as a bridge builder and providing a canvas for urban exchange.

The Tshwane inner city has limited pedestrian orientated public spaces, places that exist simply for resting or that provide recreational opportunities in the form of community activities. Existing public spaces in the capital have either limited accessibility, are flawed in their design or are badly managed, resulting in many spaces having only seasonal use. The city is designed for the motor vehicle, not the individual. It is almost impossible to find respite from the hustle on the street. This does not hinder inhabitants of the inner city from claiming parts of the city as their own. People meet in empty parking lots while abandoned warehouses are revitalized for recreational use. Taxi owners simply wash their vehicles in the streets, between the flow of pedestrians to the city.

The premise is therefore that open spaces are available, and people make do with the little that is available, however lacking this may be.

The Tshwane Inner City Development and Regeneration Strategy (City of Tshwane, 2005:13); identifies aspects of identity, entertainment, public space and safety as some of the immediate needs of the city. It identifies the need to promote "the development of inner city housing and the necessary social infrastructure or parks" (City of Tshwane, 2005:18).

This dissertation aims to understand the relationship between unprogrammed space and the necessary fixed program that gives such a space direction and identity. The proposed design of an urban park with a sports and education centre at its core, leads to the investigation of this dual relationship, and the subsequent creation of a catalyst that can uplift and promote individuals and their community. Regarding the latter, emphasis will be placed on the role of sport as a community builder in the South African context, bridging boundaries between cultures and the many different groups of people that can benefit from sport and its inherent qualities. These theoretical principles will then be tested on a problem area in the inner city of Tshwane.



Fig 1.1 Streets and sidewalks are dominated by cars

Fig 1.4 Leftover space in a parking lot is used as a kitchen

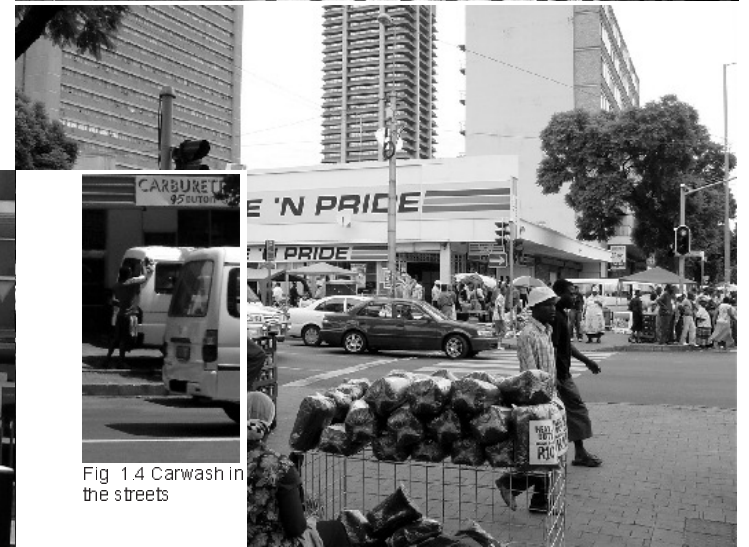


Fig 1.2, 1.3 Streets are appropriated as public space

Fig 1.4 Carwash in the streets

Fig 1.5 A Vendor selling her wares in the hustle of the streets

## Chapter 2 - Theoretical Context



## 2.1 Introduction

While considering different themes upon which to base a dissertation, a researcher inevitably considers the design of a new building on an empty stand, an object in space - possibly a health clinic or an aids awareness centre. Yet upon closer study of the city and its elements, one questions the state of the inner city and its urban sprawl and the resulting back-alleys and rubbish areas, the leftover spaces. Is it not these "between" spaces, this lost space, that harbours crime elements and results in many regarding the city as unsafe?

But what is lost space? Roger Transik (199X:1); identifies lost space as the vacant, unused land in city centres, the land that is not integrated into the urban fabric, where design decisions were made in two dimensions. Lost space is land nobody cares about and no one takes ownership of. It results in disjointed pedestrian links and a disjointed experience. However, lost space in city centres provides the ideal opportunity to create an urban centre, so that it attracts people to these areas (Transik, 199X:21).

Oscar Newman (in Broadbent, 1990:149); developed the concept of defensible space, being "a living environment which can be employed by the inhabitants for the enhancement of their lives, while providing security for their families, neighbours and friends". Should one perhaps aim at transforming these unused spaces, these lost spaces, reprogramming them into a new whole, adding a new layer that could regenerate a part of the city?

It is the opinion of the author that an urban generator in a South African context should allow for the growth of the community by providing options that were previously unavailable. Powell talks of interventions that "are for the benefit of local people" and "contribute hugely to improving the quality of life...often transforming the area within which they function" (Powell, 2004:6). Attributes mentioned are the need to create opportunities for new businesses and sources of employment and education. In an urban context, these interventions can be used to give a new identity to an area and express the inherent genius loci - the spirit of the place.

The questions now arises as to what component of daily life has the ability to uplift, to unify individuals, and create a strong sense of community and identity, creating opportunities for people to interact.

## 2.2 Sport and the community

It is a generally accepted fact that sport contributes positively to the development of the individual and the community. The United Nations classifies participation in sport and recreation as a fundamental human right, which all governments must provide to their people. Prof. Keim Lees of the University of the Western Cape (University of the Western Cape, 2007); an expert in the role of sport in a South African context, is of the opinion that sport is increasing in importance in a society driven by imagery and the media. Such is the role of sport in modern society, that the average individual will be more exposed to sport and its related intrigues, than to political and economic issues. "Sport forms an integral part of life whether as active participants or passive spectators" (University of the Western Cape, 2007).

In a statement released by the International Olympic Committee (IOC), the authority assigned by the United Nations to manage sports development in third world countries, the author identifies sport as being able to play an important role in creating a safer society, through its educational values and its inherent worldwide network (De Vidy, 2007). Further attributes of sport are discussed as the ability to help bridge the gap between cultures and reinforce social integration. Additional positive community benefits of sport include the empowerment of disadvantaged groups, reduction in crime and vandalism, encouraging pride in the community, generating employment and income, as well as improving health and education.

Thus empowerment through sport means to equip people with skills to act on their own behalf as they gain some control over their future. However, the simple act of participating in sport cannot achieve this, and the study emphasizes the organization and necessary skills needed by the community to ensure that regeneration and empowerment become a sustainable and achievable reality (Gratton and Henry, 2001:189).

Fig 2.1 Zanele Situ - The first black South African to win a Paralympic gold medal



Fig 2.2 Steve 'Kalamazoo' Mokone. Often rated as South Africa's finest footballer ever, Steve "Kalamazoo" Mokone was forced to play football in the Netherlands and Italy during the apartheid years. He learned his skills juggling a tennis ball as a child. These skills resulted in many referring to him as the Pele of Africa.



Fig 2.3 Basil D'Oliviera - Basil D'Oliviera is a South African born cricketer who was forced to go abroad to follow his cricket career. He ended up playing for England for seven years and it was his inclusion in the England team in 1968/69 that was to lead to the cancellation of their tour to South Africa and ultimately South Africa's suspension from international cricket. It was the first solid step towards normalising the sport in the country.



Fig 2.4 Sport as an event



Fig 2.5 An urban sports park in Rotterdam



Fig 2.6 Expression on the field



Fig 2.7 Social interaction



Fig 2.8 Social Interchange



Fig 2.12 Sport creates community



Fig 2.9 Space for the individual



Fig 2.10, 2.11 Sport as a cultural bridge builder



### 2.3 The role of sports administration

The focus shifts from sport as an act of expressing oneself to sport and its administration. Therefore, provided that one is able to properly manage the process of sports participation and the social interaction connected to it, it is the opinion of the author that the presence of sport in a community can provide the community with new opportunities and choices that are in some way related to the ritual of sport and its inherent infrastructure - choices in life that were previously unavailable.

This argument is in keeping with that of the International Olympic Committee, who approach community development in Africa by focusing on sport at grass-root levels. "The aim is not only to encourage recreational activities and promote healthy lifestyles, but also to consolidate the community structure" (de Vidy, 2007). Regarding crime and youth development, the presence of organized sport is proven to provide youths with positive alternatives to the use of drugs and facilitates the opportunity for adults to build up relationships with young people, helping them to question their own behaviour and understanding the consequences of their actions (Gratton & Henry, 2001: 200).

Discussing the impact of an informal event organized in a rural area, Thabo Mkhize reminisces "for a day, crime is defeated and shebeens are nearly empty – and yet another platform for sports development has been firmed up" (Mkhize, 2007:15).

The relevance of sport in community development has been identified, but how does this translate to architecture?

The opportunity arises to establish fields of possibility that will allow for the successful administration and facilitation of sport and its related events. Provided with such a relevant infrastructure, sport will allow for the "generation of opportunity and increasing participation through involvement and creating events" (Gratton & Henry, 2001:190). These events are not simply about the practice of sport, rather allowing for opportunities to meet new people in the community, as well as exposing individuals to alternative ways of uplifting themselves.

The architectural point of departure is therefore not simply the creation of only sports fields, but rather the creation of areas and opportunities for social exchange.

Thus, the chance emerges to combine sports and education: Firstly, the presence of sport events can expose individuals to alternative ways of uplifting themselves by benefitting from the opportunities created by the events. To this end a platform needs to be established that allows entrepreneurs to display their products.

Secondly, the infrastructure provided could include educational facilities, using the lure of sport to attract attention to the benefits of education in a positive environment. As an example of the positive influence of sport on the community, a study by Lang and Sanderson identified the skills developed by individuals of a target community that were involved in organizing simple sports events and sports club administration. These community members were able to not only "make presentations, run meetings, write applications, set-up events and run clubs" (Gratton & Henry 2001:195); they were now able to start new initiatives to the benefit of the community.

### 2.4 Architecture of the event

Bernhard Tschumi, in his seminal *Event Cities*, discusses the concept of events, where one ceases to focus simply on the spaces of a building, but also on the events that are to take place in and around them. Tschumi advocates the need to view architecture with regards to its ability of shaping spaces around it and allowing relevant events. In this process it influences the city on a larger scale. "There is no architecture without the city, no city without architecture" (Tschumi, 2004:8).

Tschumi proposes a collision of programmes and space wherein the resultant architecture will allow for the occurrence of events.

Discussing urban generators, Tschumi (2004:193); talks of the importance of cross-programming (the provision of multi-programmed space) and the possible events that such a program can generate. Often the scale of the building alone ensures it being a generator of new events, yet it can also simply cater for current events. Strategic placement of buildings on locations where multiple routes converge can also allow them to provide momentary pauses along these routes.



Fig 2.13 Architecture of the Fanfest, Germany 2006



Fig 2.14 A reprogrammable square in the Landschaftspark, Germany

Inherent to the success of such cross-programmed spaces, is the presence of sufficient infrastructure and buildings that provide a sense of permanence in a field of unprogrammed space. The occurrence of an annual event also creates in the participant a feeling of permanence and stability. Thus, despite the flexibility inherent in unprogrammed event spaces, such an intervention requires the need of several elements with a fixed program. Ben van Berkel (Van Berkel & Bos, 1999:46); in a project that combines a sports stadium with a wide range of additional programmes, talks of the folding bicycle versus the racing bicycle of architecture. The folding bicycle entails that part of the building that is reprogrammable, allowing for several uses and programmatic environments. At the same time it needs the presence of the racing bicycle - the fixed sports fields in this case - which positions the development in a certain context and provides a stability which informs and supports the reprogrammable fields (Van Berkel & Bos, 47). The present and future events of a site can help narrowing the design to a certain range of possibilities.

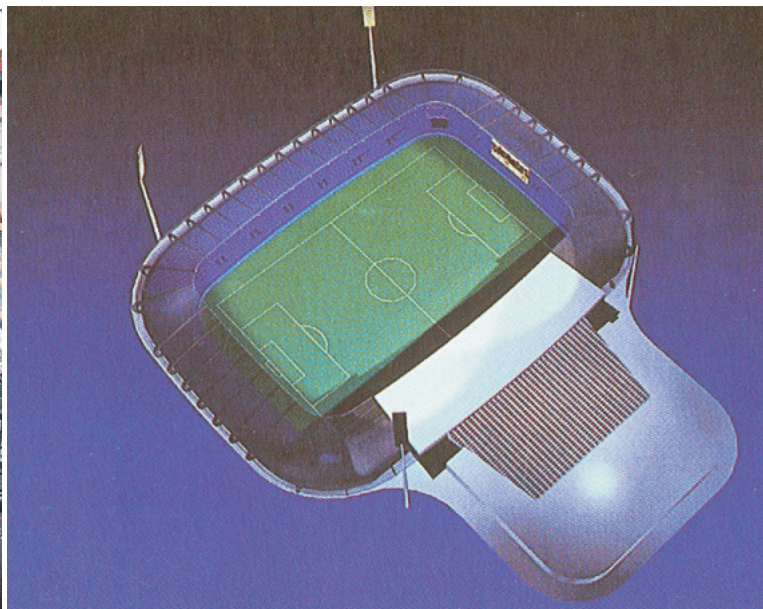


Fig 2.15 Stadium Rotterdam, Holland

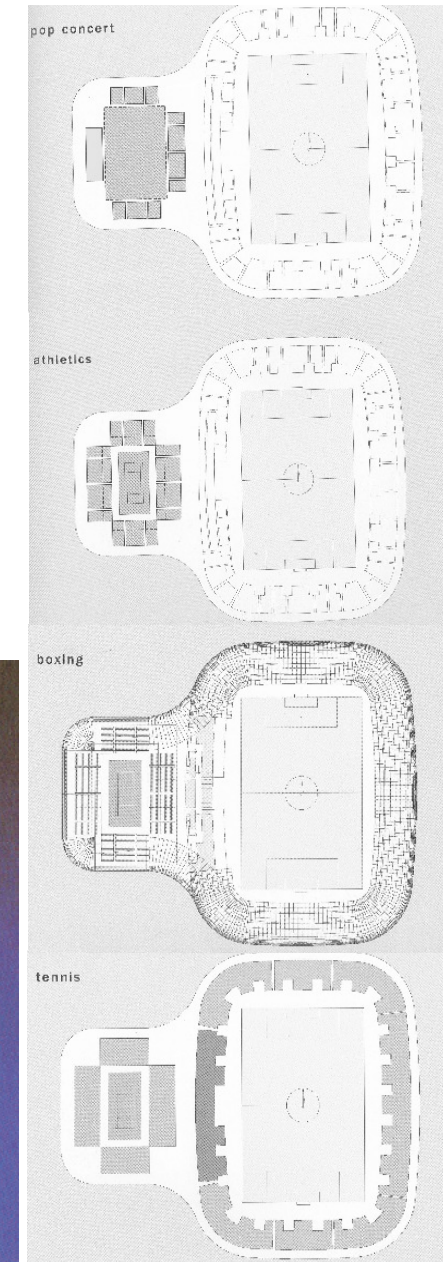


Fig 2.16 The relationship between the two bicycles of architecture

## 2.5 The intervention at an urban scale

Tschumi (2004:194); talks of the increasingly important relationship between the urban environment and the individual building. The building should relate to its immediate environment and be relevant to its district in the city. Rem Koolhaas does a study of modern urbanism, describing what he perceives as being the main problem with dealing with the constant change of cities. He states that "professionals of the city are like chess players who lose to computers" (Koolhaas & Mau, 1995:963). He describes the city as being immovable, and of the professional as being unable to efficiently shape the many factors that shape a city. Ultimately, the city judges the success of any new intervention. Similar to Van Berkel, Koolhaas discusses the concept of a new urbanism, an approach where one surrenders a certain amount of control to chance". If there is to be a new urbanism it will not be based on the twin fantasies of order and omnipotence; it will be the staging of uncertainty; it will be more concerned with the arrangement of more or less permanent objects but within the irrigation of territories with potential." (Koolhaas & Mau, 969).

Designing unprogrammed spaces is therefore not about designing a building that is able to cater for every single possibility, neither is it the anticipation of all possible changes. Rather, it is the design for a certain range of possibilities that could possibly occur on a certain site. This is where the presence of fixed program is important, as it will be an indicator of the possibilities of the precinct as a whole. Saunders (2006:3); in an article on successful multi-use precincts, identifies compatible diversification in the use of buildings as an integral element by emphasizing that the "key to the process is determining which types of facilities are best suited to mixed uses and what type of functions are compatible".

One could therefore maintain that a successful unprogrammed space has the correct fixed programme at its core. In large developments of reprogrammed fields, sufficient infrastructure should therefore form an integral part of the approach.

From the above, one can therefore suggest that for the successful intervention of reprogrammable fields, there needs to be sufficient infrastructure of a fixed nature to complete the intervention and give it meaning. There is a dual need of programmed and unprogrammed space for a successful urban intervention.

## Chapter 3 - Brief



### 3.1 Problem Statement

“There is a serious lack of active recreation areas and sports grounds in the inner city.” - The Tshwane Inner City Development and Regeneration Strategy (City of Tshwane, 2005:27).

The design problem is a sport and education facility for students and the community in the study area. The facility provides the necessary infrastructure for a public precinct, a spine that is unprogrammed and flexible in that the community can stage a vast range of events, within a city block identified for these purposes. Effective placement and integration of this precinct into the urban fabric further requires the exploration of the potential of reprogramming the whole city block to function as this public precinct. Such an intervention will assist in providing an identity to the area. The vehicle to bring about this change is recreation in the form of sports facilities, and the potential link of using sport as a method of exposing individuals to education and financing facilities available to provide them with choices in life.

Of further importance is the accommodation of current on-site activities and the need to provide the community with safe social spaces and lend identity to the area.

### 3.2 Sub Problems

To fully understand the situation, the problem can be explored by analyzing the following sub problems:

- A - The study of the role of sport in a South African context and the potential of sport as a unifying element in a community.
- B - The study of sport facilities and their relevant programme.
- C - The study of public squares and their successful characteristics, including the presence of both unprogrammed space and fixed programme in such places.

### 3.3 The intervention

Thus, the dissertation will firstly focus on reprogramming the city block as a whole, creating a public precinct with the subsequent vital connections to the city that will ensure the flow of energy into the lost space.

The tendency to place sports facilities on city outskirts in recent times in South Africa, has resulted in a limited use of these facilities. An example of this is the Chatsworth Youth Centre in Durban, that has fallen into disuse and has been taken over by a crime syndicate (Harbour, 2007). It is quite obvious that a facility that provides big open spaces can easily be accessible to the public at all times of the day, ensuring a place of safety and much needed social spaces in the city. The existence of dead spaces in the city provides an ideal opportunity to convert these into vibrant public spaces. The subsequent mass of people present in one place provides the opportunity for community upliftment through commercial ventures, and therefore a skills transfer program will be initiated. Finally, current site uses will be respected and catered for in the reprogrammed city block.

Secondly, the dissertation will focus on the design of a sports and education facility in the newly established public precinct that will expose individuals to opportunities in life. The educational component present in the building also provides the surrounding educational facilities with much-needed library and Internet facilities. The role of sport in a South African society has already been discussed in Chapter 2.

## Chapter 4 - Context Analysis

## 4.1 Introduction

Pretoria, the capital city of South Africa, is located in the municipality area of Tshwane, in the province Gauteng. The city is bounded by the Magaliesberg mountain range and has the Apies and Steenbok rivers as natural features that shape the city. The study is located in the north-east of Pretoria's central business district, a city block away from the city-splitting Apies River. The study area is fragmented and lacks identity. It is a mixture of government institutions, scattered houses, office blocks and an abundance of ill-defined dead spaces between several warehouse-type buildings. Pedestrian activity and movement is suppressed by several high-speed thoroughfares in both directions.

A Brownfield area in a city block in the north-eastern part of the city centre, bordering on the clear-cut edge that is the Apies River, is selected as the site for the study. The city block in question is split by Shepherd Street, which is one of only two streets in the inner city that split the massive Pretoria city blocks into two parts, the other being Brown Street two city blocks away. At the moment both streets serve simply as limited loading zones for warehouses on the city block, hardly a reason for existence for the streets. The street creates a potential movement axis but is currently not effectively linked to the pedestrian or vehicular grid that flows through the city, resulting in an unsafe environment. The linking of the street into the urban fabric of the city is therefore essential to the success of the precinct.

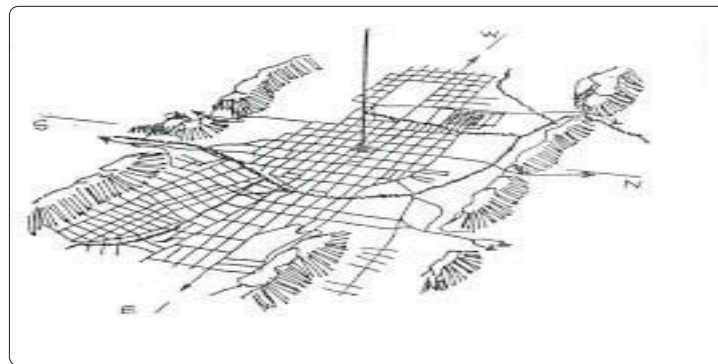


Fig. 4.1 The geographics of Pretoria



Fig. 4.2 Highspeed thoroughfare - Struben Street



Fig. 4.3 Vibrancy of the streets, a hat vendor

Fig. 4.7 Ill-defined dead spaces are scars in the urban fabric of Pretoria



Fig.4.4 Safety is an issue, depicted by the barbed wire keeping potential thieves from entering via the roof



Fig. 4.5 Prinsloo Street covered walkways, used by pedestrians moving towards the city centre



Fig. 4.6 Buildings are closed off and unresponsive to the street



Fig.4.8 Struben Street - dirty and wet, a pedestrian-unfriendly strip

## 4.2 The development at a macro scale



Fig. 4.9 The greater Pretoria context, scale 1:30000

### 4.3 The development at a meso scale



Fig. 4.10 The city and vehicles, scale 1:5000

#### 4.4 Opportunities and threats

Towards the north of the study area is an abundance of educational facilities, the most significant being the Pretoria Hospital school and the Prinshof school. These institutions are however, cut off from the city centre by the physical barrier that is Dr. Savage Road. Of vital importance to the area is the Bloed Street taxi rank. This is a crucial artery that provides an influx of daily workers into the city from Tshwane's several scattered townships and suburbs.

According to a local vendor, pedestrians move downwards towards the city centre using Prinsloo Street, passing directly by the site. Several smaller and scattered informal taxi ranks exist in the streets of the inner city, attempting to gain first access to potential customers. The city centre ends abruptly towards the east, where the presence of the Apies river, combined with Nelson Mandela road, present a barrier to pedestrian movement. The implementation of the Nelson Mandela Development corridor (City of Tshwane, 2005); should improve this situation and the link to Arcadia. Also in the development framework, is a proposed recreation and entertainment precinct, within a block of the site. West of the site is the commercial success of the Sammy Marks square and the presence of several job opportunities.

To the south-east of the chosen city block, the Metro, a wholesale store on Du Toit Street, exists as a commercial node, and a new recreational node is proposed next to the Bloed Street taxi rank. There are also several religious institutions in the area, like the Mosque and several Christian churches. Bethesda church provides a strong influx of people into the area on weekends. In an interview with Mrs. Mpofu, the wife of Pastor Mpofu of Bethesda church, she stated that an average of 1500 people attend the church services on weekends, with the church regularly organizing inter-denominational soccer, volleyball and basketball competitions (Mpofu, 2007). The organization is also interested in establishing a business school in the area. Safety is generally a concern in the area.

The Caledonia stadium is in the vicinity of the site, yet the scale of the proposed intervention differentiates the two buildings. The Caledonia stadium is aimed at a city-wide scale, regularly hosting provincial soccer matches and tournaments. The new intervention proposed in this dissertation is aimed at a micro scale, providing recreation facilities and an urban park for the community and students of the immediate area.

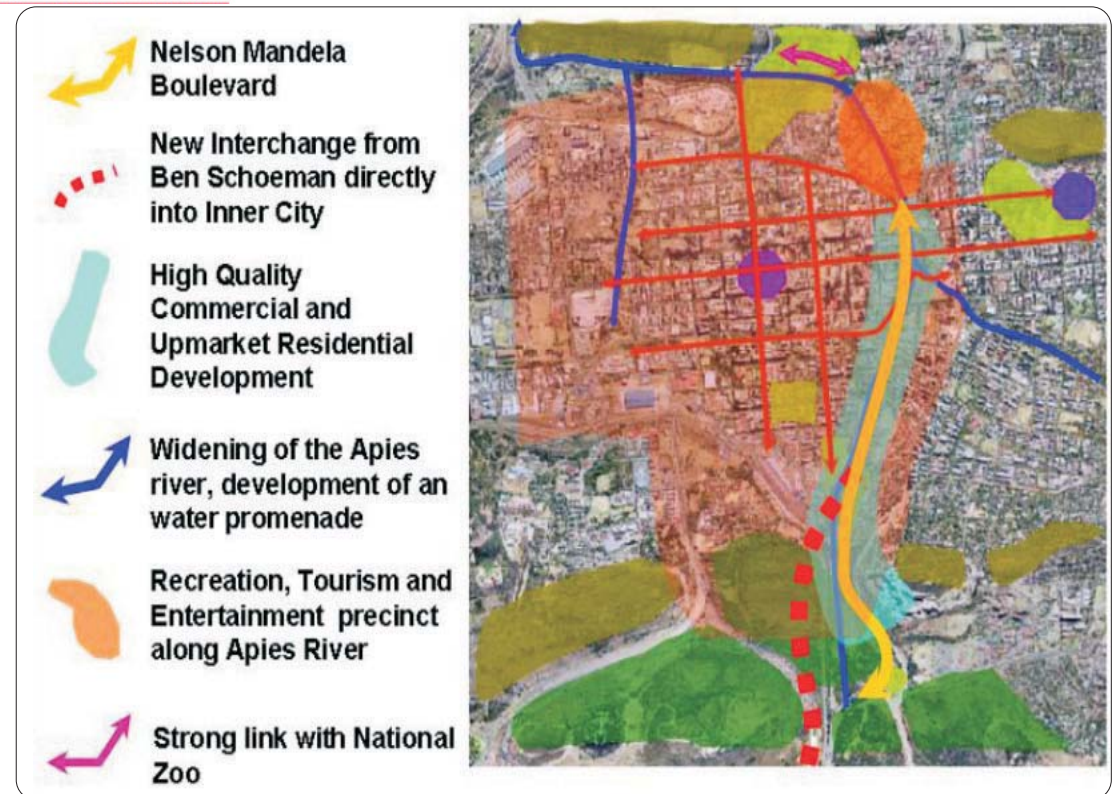


Fig. 4.11 The Tshwane inner city development framework

## 4.5 Users

The need for sufficient pedestrian movement through the site is important, as the proposed precinct requires the presence of a large group of people in the area to ensure the sustainability of such a precinct. In the study area there is an abundance of several educational institutions. Many are established educational facilities, including Confidence College, SA College, Tshwane North College, the TUT Arcadia campus and the TUT arts campus (see fig. 4.14). The Pretoria IDP (City of Tshwane, 2005); also suggests a revitalization of the former Justice College. Most have serious need of recreational facilities. An interview with Johan Roos (2007); Headmaster of Confidence college, which is present on the southern corner of the city block, revealed that the children need recreational spaces. He also mentioned that the idea to convert the piece of unused land that is the central theme of this dissertation, has in actual fact been entertained. A possible link with SA College is also advisable, providing that a stronger pedestrian link over the Apies River can be established.

There are several scattered housing developments that have a desperate need for social and recreational facilities and a new housing development is proposed on Struben Street (see 4.8 below). It has been proposed that a ring road tram system runs around the inner city, with stops at every 300 to 500 meters. Figure 4.14 shows the lack of defined public social spaces in the city, none of the existing ones falling within a 5 minute walking circle from the site.

The project as a whole will thus be aimed firstly at the students of the several existing educational facilities in the area (see fig. 4.14), secondly, at the community living in the residential areas and the newly proposed housing developments, and thirdly at individuals simply passing through the area. These individuals will be able to vent energy in creative ways, either through sport or via the presence of educational facilities in the building. For the community the project will provide a canvas for expression, a public precinct that creates opportunity, a stage for either big events or simply for daily life. There will be room for choice.

Funding for the project will be a public-private initiative, with funding obtained from the Department of Education, the Department of Sports and Recreation and the Sports Trust, whose beneficiaries include Engen and Coca-Cola. The Sports Trust will manage the precinct.

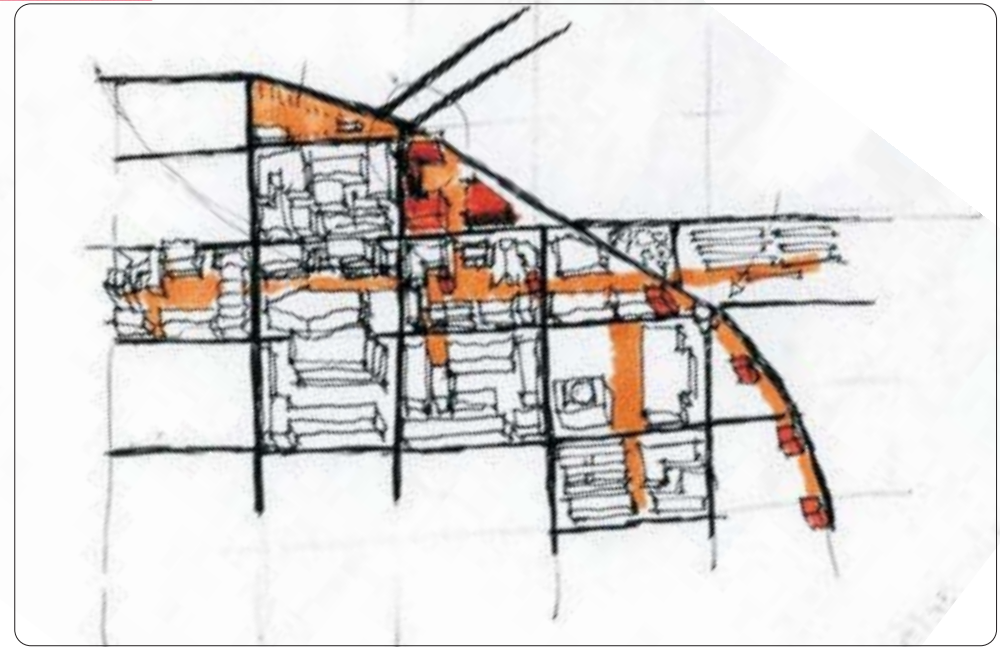


Fig. 4.12 Analysis of pedestrian routes

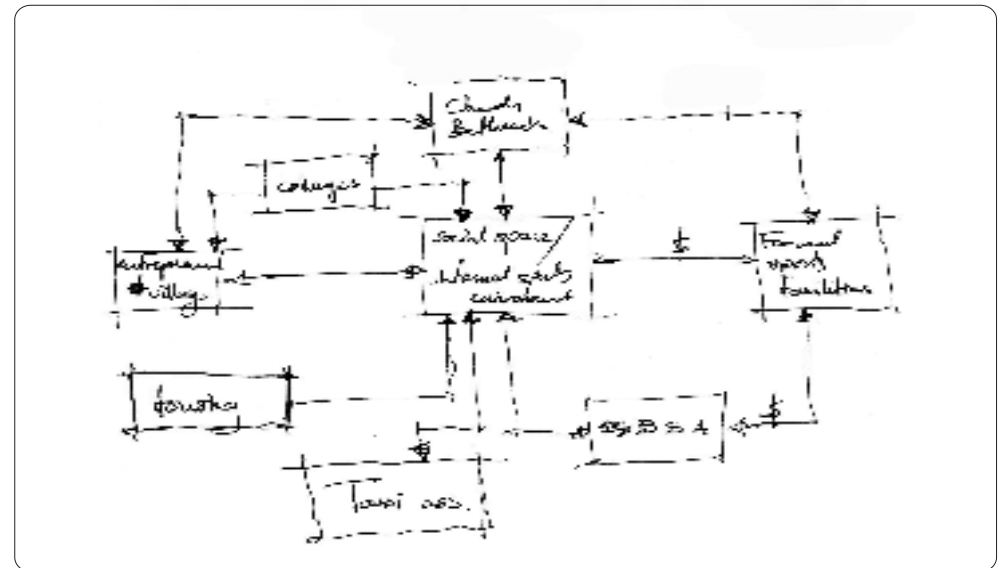


Fig. 4.13 Diagram depicting on-site agents and their relationship to the intervention



#### **4.6 Extending the pedestrian network**

An idea discussed by the class as an urban proposal for the area is to continue the existing network of arcades in the Pretoria CBD into the area. These arcades will not only connect the area to the CBD and reinforce some of Pretoria's rich history, but it will also provide alternative routes for pedestrians through the city in a less harsh environment. The idea behind the arcades is not to remove attention from the street environment, but to rather provide shortcuts for pedestrians and to provide opportunity within the city blocks for development. The arcade system continues towards the proposed Nelson Mandela Boulevard.



Fig. 4.14 The city and the pedestrian, scale 1:5000

Civitas

SAMBA building, former Justice college



Fig. 4.15 The city block and its immediate context



**Restrictions as per the zoning certificate issued by the city council of Tshwane**

Use zone : General Business

Purposes for which buildings may be erected, amongst others:

- Business buildings
- Places of instruction
- Places of public worship
- Residential buildings
- Retail industries
- Shops
- Social halls

Erected with special consent  
Places of Amusement  
Sports grounds

Density restriction : None

Height : 25 metres

Coverage : 60 percent

#### 4.7 The development at a micro scale

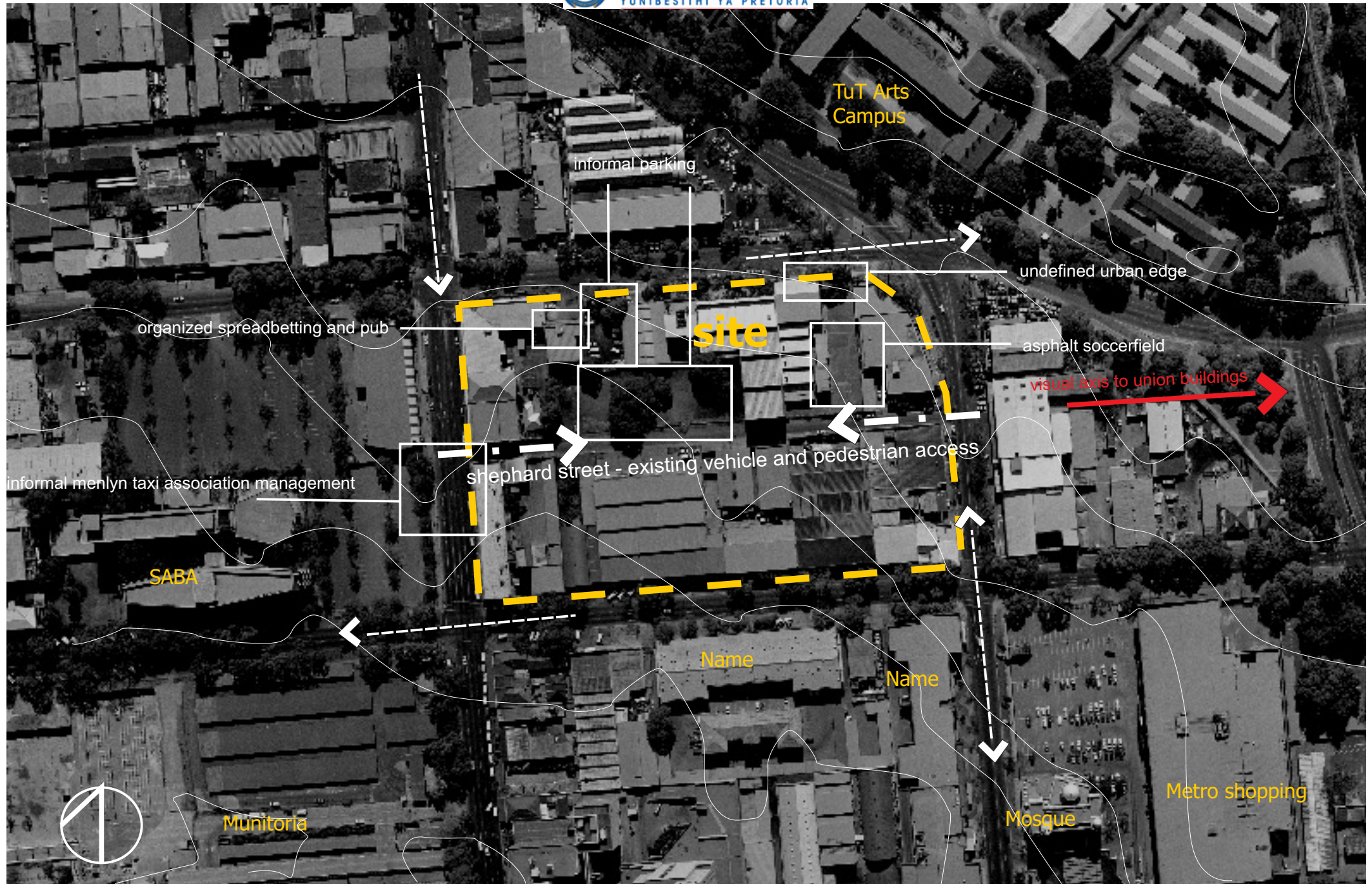


Fig. 4.16 Site and boundary conditions, scale 1:1000

## 4.8 Street conditions

### Struben Street

#### Prinsloo Street

According to a local vendor, pedestrians move downwards towards the city centre using Prinsloo street, passing directly by the study area. Informal traders benefit from the pedestrian movements with their shops under the canopy that frames the walkways, which give the area some historic meaning. Menlyn Taxi Association have an informal taxi rank operating on the corner of Shepherd and Prinsloo Street.



Struben Street is a busy vehicular street towards the east. A betting agent benefits from the canopy that frames the north-western corner and there is a lot of pedestrian activity up to this point, creating the opportunity for some informal eating and drinking places. Several trees line the street and create some shade for an otherwise harsh pedestrian environment.

#### Du Toit Street

Lots of pedestrian activity on weekends due to the presence of Bethesda Church, other shops include a coffee shop and bookshop. The street links to several landmark buildings, including the Metro Shopping centre and a mosque.



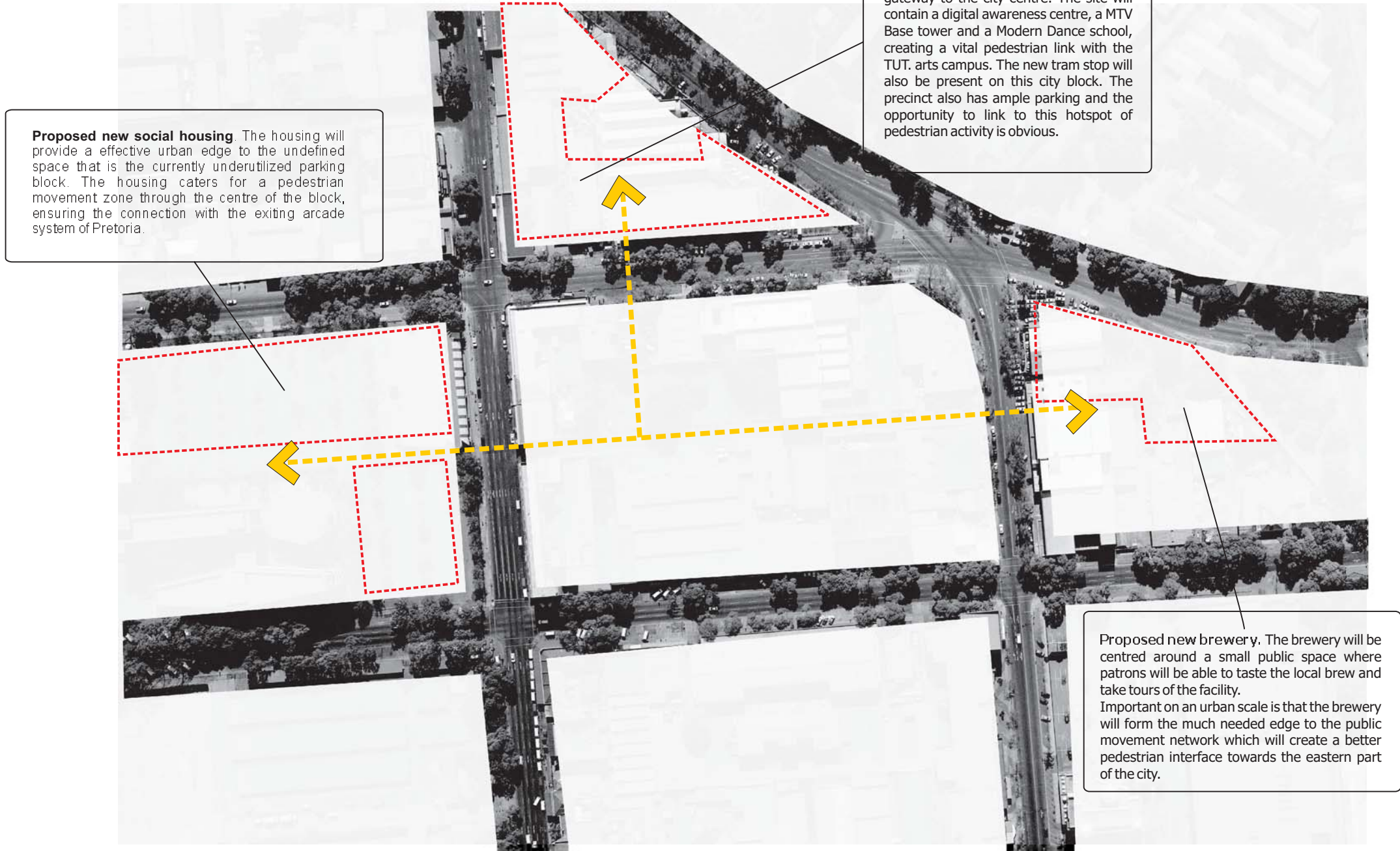
#### Proes Street

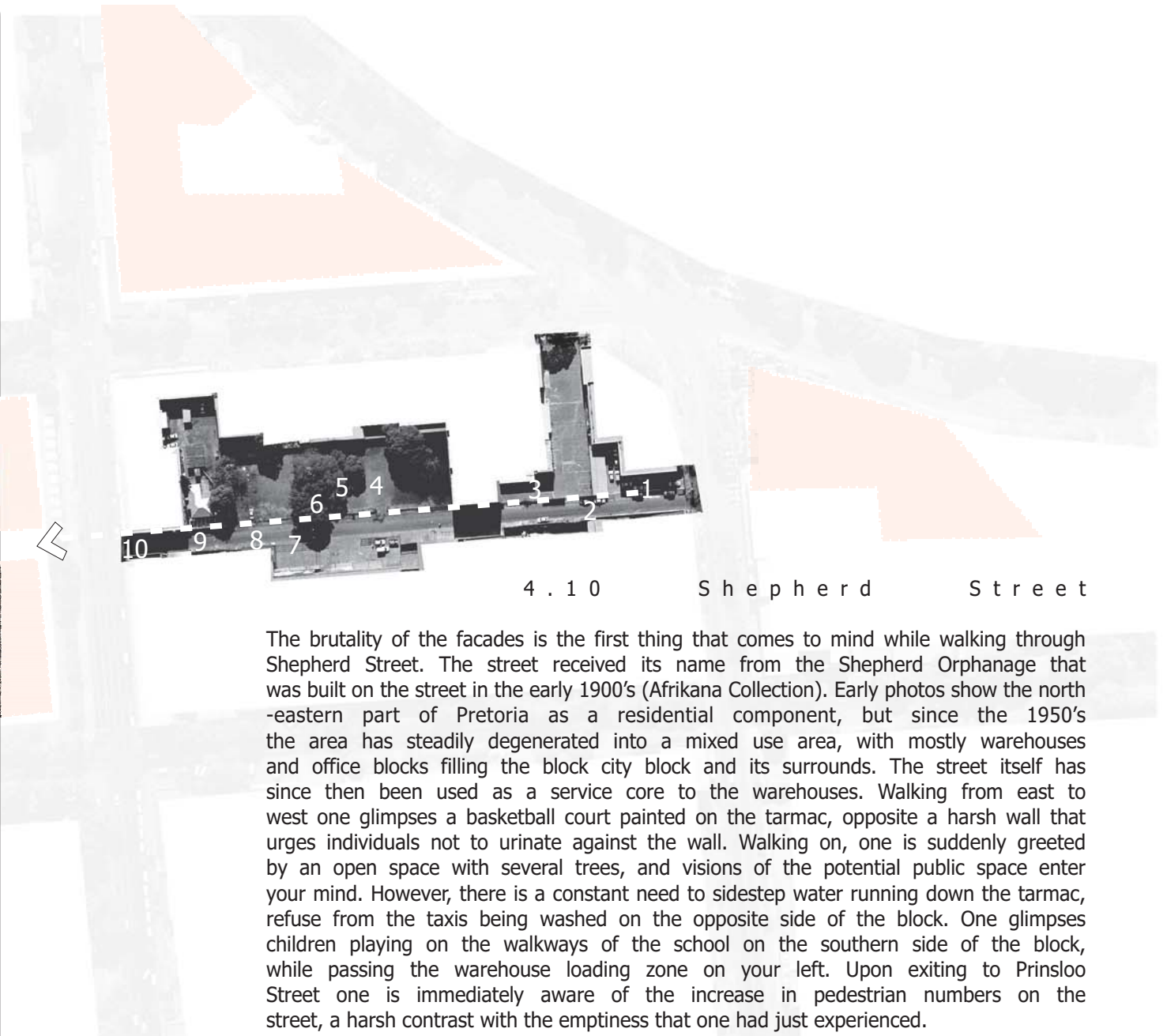
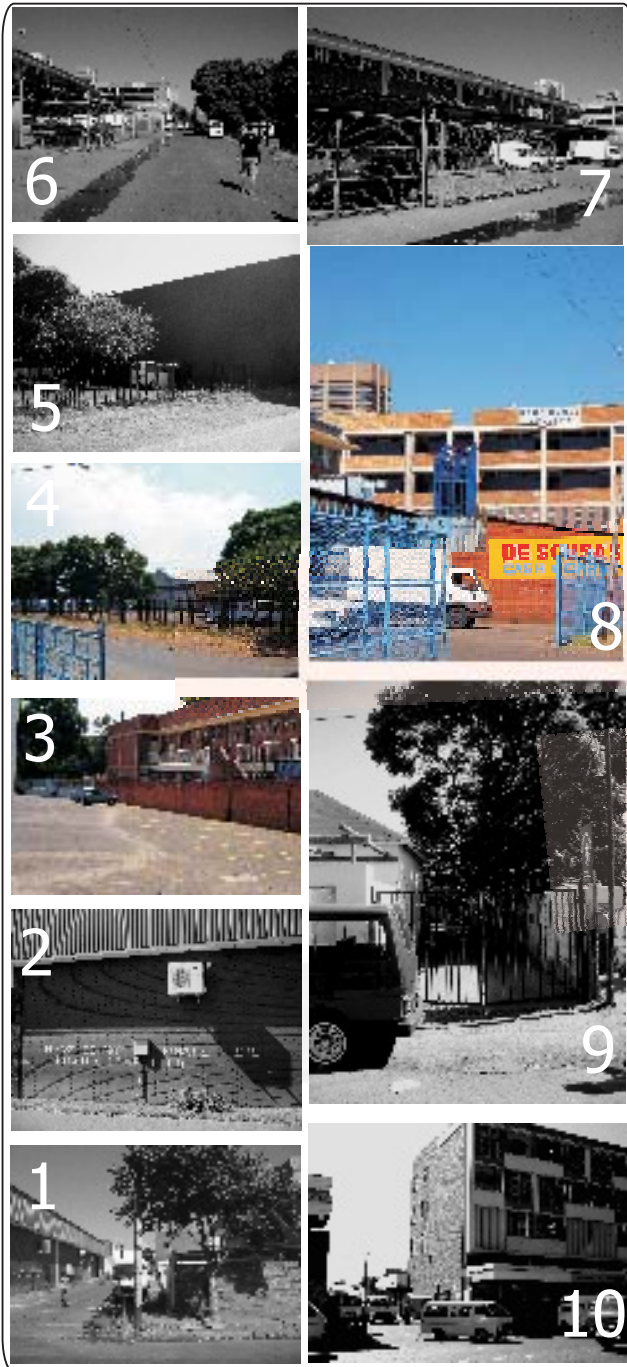


Typical of the one-way streets of Pretoria, Proes Street runs from Arcadia through to Pretoria West. The northern side comprises of several informal shops, such as small cafes, informal car repair shops and even more churches. Between these are warehouses that are usually inactive, resulting in a sullen environment. The southern side is a far more hostile environment, with most buildings either fenced and abandoned or extremely unresponsive to the context.

Photos by author

#### 4.9 Proposed new developments in the class framework





The brutality of the facades is the first thing that comes to mind while walking through Shepherd Street. The street received its name from the Shepherd Orphanage that was built on the street in the early 1900's (Afrikana Collection). Early photos show the north-eastern part of Pretoria as a residential component, but since the 1950's the area has steadily degenerated into a mixed use area, with mostly warehouses and office blocks filling the block city block and its surrounds. The street itself has since then been used as a service core to the warehouses. Walking from east to west one glimpses a basketball court painted on the tarmac, opposite a harsh wall that urges individuals not to urinate against the wall. Walking on, one is suddenly greeted by an open space with several trees, and visions of the potential public space enter your mind. However, there is a constant need to sidestep water running down the tarmac, refuse from the taxis being washed on the opposite side of the block. One glimpses children playing on the walkways of the school on the southern side of the block, while passing the warehouse loading zone on your left. Upon exiting to Prinsloo Street one is immediately aware of the increase in pedestrian numbers on the street, a harsh contrast with the emptiness that one had just experienced.



## 4.11 Historical Context

349 Struben



A corner building reflecting the style typical of the Bazaar era, creates a typology in conjunction with 355 and 352 Struben Street. The building is currently used as a street cafe.

355 Struben



Two corner buildings reflecting the same style typical of the Bazaar era. Buildings are rounded at the corners of the street, with projected verandas over pedestrian walkways, are of typological importance to the city (Le Roux, 1991).

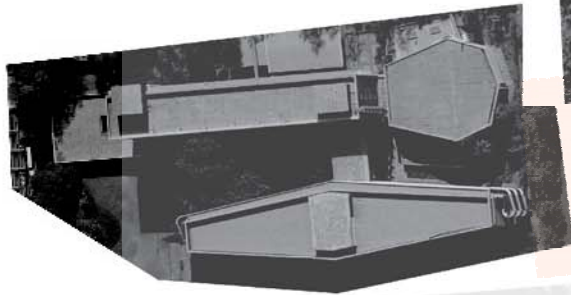
Both buildings are used as supermarket/street cafe's. 3555 Struben street has a second storey that is currently in disuse, but which can be reused as its original use, being housing.

352 Struben



Pretoria mosque and Metro

The building is a prominent beacon in the area, with its minarette functioning as a verticle needle. The building provides identity to the area and is located next to the Metro department store, which draws hundreds of people over weekends.

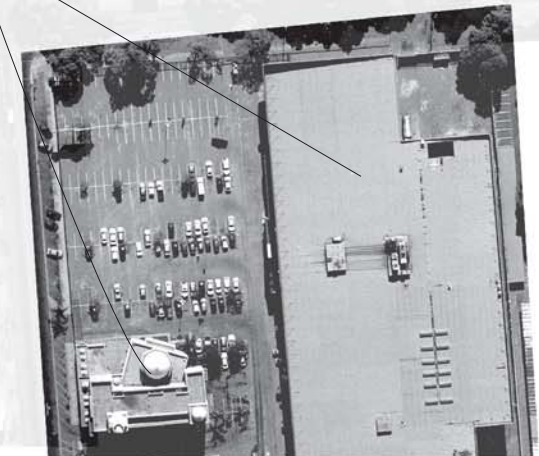


Justice college

This four-storey building, typical of the modernist buildings in Pretoria, was built in 1959 and was designed by Brian Sanrock. The building is typically raised on pilotis and has steel strip windows and a freestanding auditorium (Le Roux, 1991). Currently the buildings functions as the headquarters as SABA, but the TDF suggest a return to its original use.



Photos by author



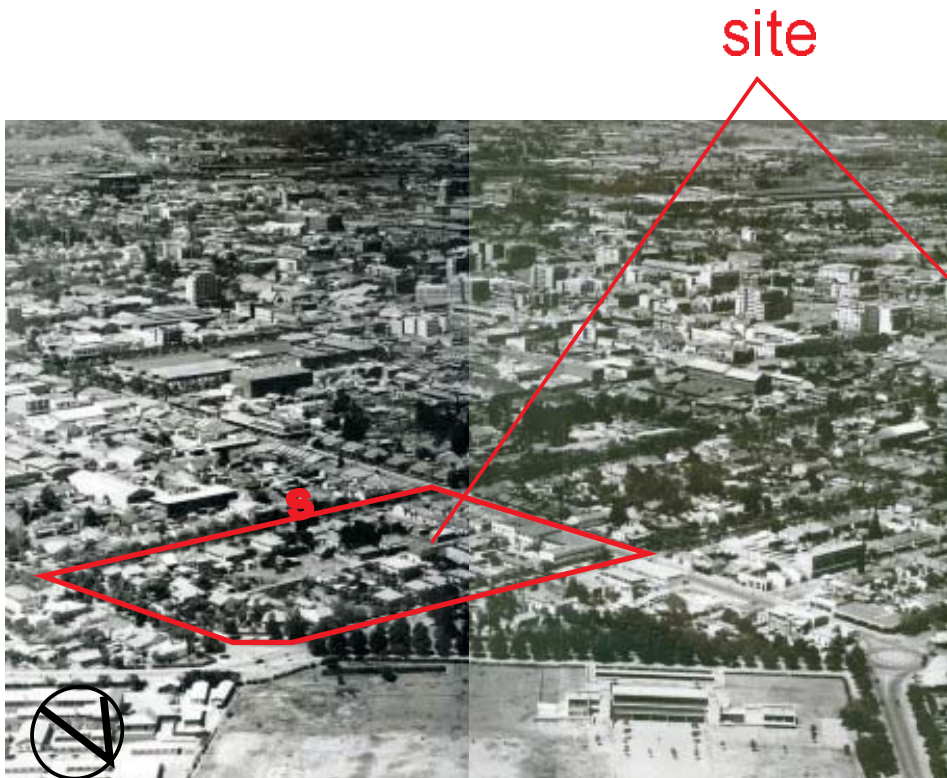


Fig. 4.17 Pretoria aerial photo



Fig. 4.18 Diagram depicting current density

## 4.12 Current on-site activities

Confidence college

Originally an office block, the Confidence College has been running since 1993. After the Apartheid Era, Model C schools started opening up in the cities, available to all students, Confidence College being one of them. According to Mr. Roos (2007); Headmaster of the school, the children are mostly of Portugese and African origin, and he estimates that 30% live in the city itself, residing in the flats being developed under the banner of urban regeneration. The rest of the children mostly come from the townships. Thus after-school care is often a problem for parents. The school is in serious need of recreation facilities for the children and has considered the possibility of purchasing and developing the open parking area in the centre of the block. Sports activities practised by the children include soccer, basketball and cricket.



Photos by author

## Bethesda Church

The Bethesda church is an international organization, with the Pretoria Central branch having a membership base of 1500 members. According to Mrs. Mpofu (2007); the church draws strong crowds every Wednesday and Sunday. The church also regularly organizes inter-denominational soccer, volleyball and basketball competitions. Currently, informal recreational sport activities occur on the makeshift soccer field drawn on the asphalt paving behind the school. The organization is also interested in establishing a business school in the area.



Periti flats

The building generates a lot of activity from 5-8 in the afternoon and during weekends. The building houses TAB sports betting, a driving school and an insurance broker. The two top floors, consisting of office space, are currently in disuse. The building creates some pedestrian movement on Struben Street and the space in front of it is used as an informal eating place.



Photos by author



### 377 Shepherd Street

Warehouses built in Enrek Properties (PTY) LTD in 1964. The warehouses are currently in use, owned by Binins CC and G.L.Goldstein. The buildings serve as storage space to the companies from where goods are distributed to other parts of the city. The location is not a necessity to the program currently in the building, and the operation could easily be relocated.

### 359 Struben Street

An abandoned warehouse next to the Bethesda church, the building is insignificant from the outside, and extremely unresponsive towards the street. However, upon inspection, the sawtooth roof with clerestory windows provides an amazing space on the inside of the building. Until a few years back, the building had been used by another church group and is therefore still in good condition. The building will have to be opened up to the street if reused. It is currently in disuse.





### 4.13 Conclusion regarding on-site buildings



<p><b>1</b> 255 Struben Use : Regular Condition : Average Heritage building</p> 	<p><b>2</b> TAB spread betting Use : Regular Condition : Good</p> 	<p><b>3</b> Freedom Fellowship Use : Unused Condition : Poor Demolition advisable</p> 	<p><b>4</b> Periti Flats Use : Regular Condition : Very good</p> 	<p><b>5</b> 359 Struben Street Use : Unused Condition : Good Reprogramming advisable</p> 	<p><b>7</b> Bethesda Church Use : Regular Condition : Good</p> 
<p><b>6</b> Ad hoc additions Use : Unused Condition : Random</p> 					



<p><b>13</b> Confidence college Use : Weekdays Condition : Good</p> 	<p><b>12</b> Adhoc shopping Use : Limited Condition : Medium Demolition advisable</p> 	<p><b>11</b> Biddums Warehouse Use : Storage Condition : Good Upgrade possible</p> 	<p><b>9</b> Enrec Warehouse Use : Storage Condition : Good Upgrade possible</p> 	<p><b>10</b> Du Proes Warehouse Use : Storage Condition : Medium Demolition advisable</p> 	<p><b>8</b> Adhoc shopping Use : Weekends Condition : Poor Demolition advisable</p> 
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## Chapter 5 - Precedent Studies

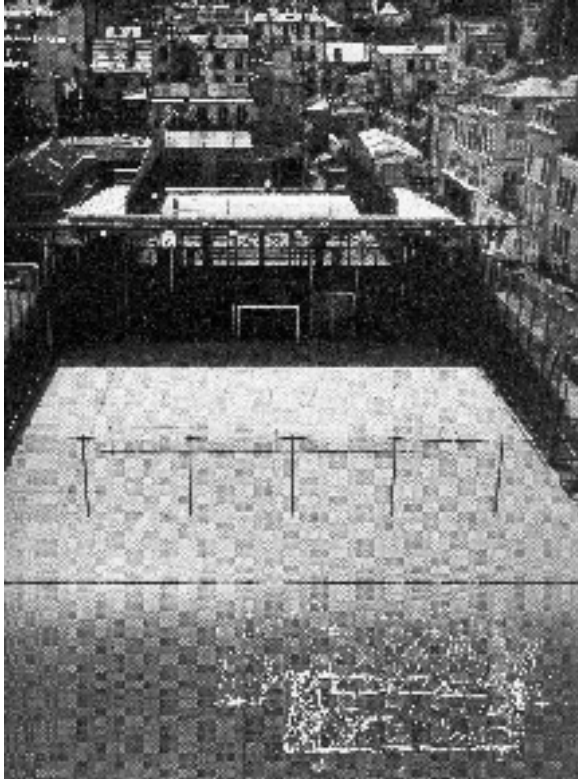


Fig. 5.1 Passive surveillance is an important design consideration

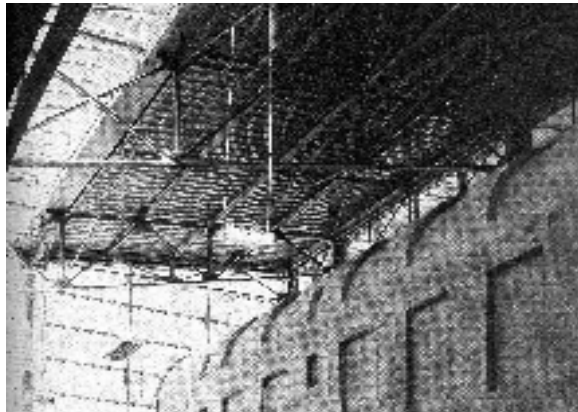


Fig. 5.2 Optimum use of glass facades, in contrast with more rugged materials

### 5.1 Precedent study 1

Program: Bastille sports centre, Paris.

Architect: Massimiliano Fuksas

The Bastille sports centre is an intervention in a very rigid and pre-defined urban grid, with limited space available in a dangerous neighbourhood. The building solves the problem by digging underground, and combining housing, sport and an urban park in a very intricate and intimate manner, with some of the walls of the building literally functioning as ringside seats to the sporting events (Slessor, 1990:64). There is at all times a strong visual connection between the activities and a pedestrian walkway running adjacent to the building. Materials and tectonics provide the area with a new identity, and the housing block runs along the street edge to reinforce the urban fabric.

The building is a good example of sharing public spaces between different social groups and programming open space to be used as various sports fields. Sports fields protrude into the streets of the site and the underground sports hall is visible through clerestory windows. Fuksas shows how intelligent material use can give new identity to an area needing originality by using intricate metal cladding on all surfaces that are visible from the street edge (Slessor, 1990:68).

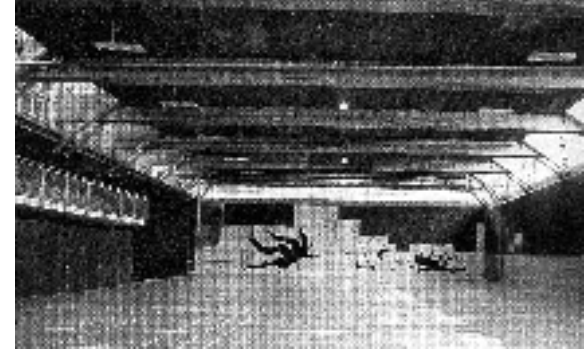


Fig. 5.3 The underground sports hall

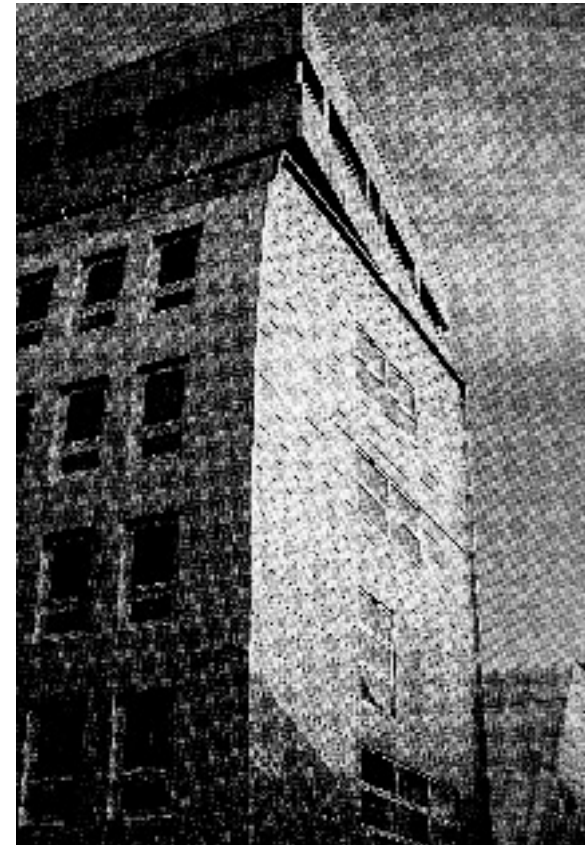


Fig. 5.4 The building provides identity through material use

## 5.2 Precedent study 2

Program: Drill Hall, Johannesburg

Architect: Micheal Hart Architects & Urban designers

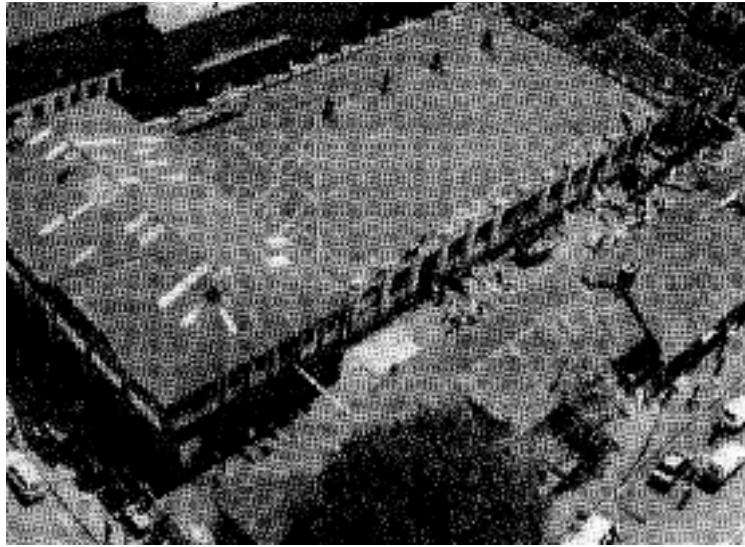


Fig. 5.5 The Drill in an urban context

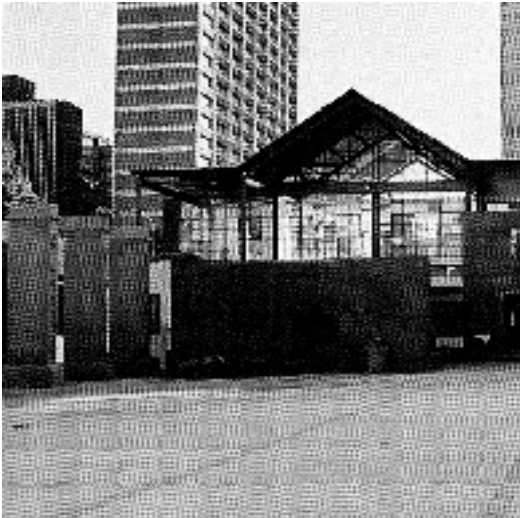


Fig. 5.6 Glass facades create a open and transparent appearance



Fig. 5.7 The Drill Hall



Fig. 5.8 A performance to viewers in flat buildings



Fig. 5.9 An unorthodox performance

The reality is that limited areas for events and expression are available in South Africa. However, one project that has achieved considerable success, is the Drill Hall in Johannesburg. The Drill Hall lies in a densely populated area and is now used as an exhibition and cultural space. The building is recognized as being a good example of adaptive re-use of an existing building as part of a sustainable city environment (Deckler, Graupner & Rasmuss, 2006: 29). To fully understand the success of the Drill Hall, one can simply recount an event hosted during March 2007 by Cascoland. Adam Levin recounts his experience of events organized by Cascoland – a group of interdisciplinary artists from SA and the Netherlands - in the Drill Hall. The Hall was used as a canvas for expression, attempting to create a stronger sense of community by introducing small interventions in the Hall and its surrounding area. One of these interventions was a performance of Swenkas, which entailed participants parading in front of an audience, showing of their striped socks, red suits and cufflinks in several frozen poses. The event was used as a tool to attempt to create connections between culture and was held the week before a contemporary dance piece was performed for this same reason. The experience was not limited to the Drill Hall, as it spilled into the streets of the Joubert Park area. One of the many successes of the events was that children who started playing in the Hall, resulting in their parents following them there and soon becoming regular visitors. The reality however, is that funding for these projects is difficult, and the community needs to take ownership of the project.

Lessons learned from the Drill Hall are the need to have strong management systems in place, combined with initiative from the community. The history inherent in the building, combined with a well-defined space, provided the community with a strong sense of security. The action spilled into the streets, showing the potential of such spaces as urban regenerators. The Drill Hall shows how the simple re-use of abandoned buildings can provide a canvas for community expression.





Fig. 5.10 The reprogrammable public square



Fig. 5.11 Trees are used to define walkways

### 5.3 Precedent study 3

Program: Duisburg-Nord Landscape Park, Germany.  
Architect: Peter Latz

The Landshaftspark in Duisburg-Nord is an attempt by the landscape architect to reclaim what has been lost. From an old industrial area, Peter Latz has created a recreational park that is used for multiple purposes (Brandolini, 2000:75). From walks in nature, to concerts or scuba diving courses, the landscape park has truly been reinvented as the ultimate outdoor recreation park in Germany. The design makes use of multiple paths and viewpoints into the buildings to intrigue the user and create a suspense of what is around the next corner.

Palimpsest is integral to the success of the park. Palimpsest refers to a manuscript or parchment that has been written on more than once, so that earlier writings are still visible. Translated into design, the idea is that given the chance, the history of a place can and will rise from its grave (Lacayo, 2007:46). Thus, older visitors can “reminisce about the time they or their parents worked in these places, while younger generations stare in amazement at the world that never belonged to them” (Brandolini, 2000:79). The use of light during nighttime creates sculptures out of the industrial towers and gives the building the status of icon in the community. It is important to note that, although tourism is a strong motivation, these developments benefit the locals most in that effective public space has been created and ruins have been turned to active recreation areas (Lacayo, 2007:44).

The park shows the effective reuse of old buildings and even machinery on-site. Even though it is now a vibrant park - the dignity of what was before is given the necessary respect.

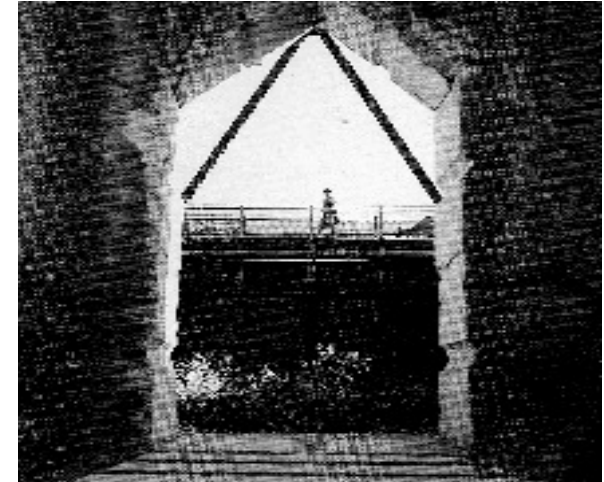


Fig.5.12 Openings are cut in existing walls to reveal what was hidden

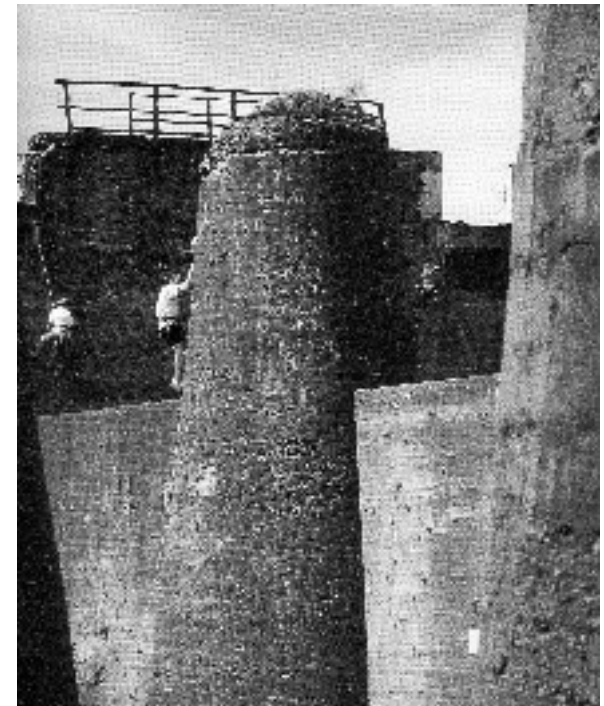


Fig. 5.13 The building provides natural climbing walls



Fig. 5.14 View from the building, showing additional residences and pool facilities

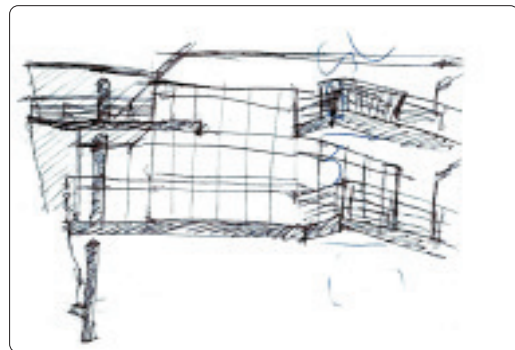


Fig. 5.15 A study of the facade

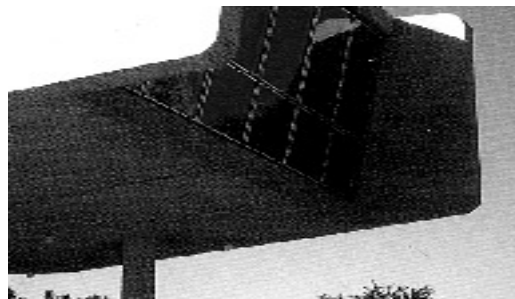


Fig. 5.16 Pretoria vernacular - the freestanding auditorium



Fig. 5.17 A strong entrance

#### 5.4 Precedent study 4

**Program, Structure, Materials:** High Performance Centre, Pretoria

Architect: SoundSpaceDesign

The HPC is a building that embraces the architecture of Pretoria in a very distinct way, as there strong reference to the early modernist traditions. The building has elements such as pilotis, the floating concrete roofs, free-standing glass facades and the free-floating auditorium. Yet, this is the Modern in a contemporary way, effectively combined with elements common to Pretoria - namely the plinth, mid section and roof. The tectonics of the building seem institutional, with the excessive glazing in the building reflecting an architecture of openness and transparency.

The building houses many functions, is able to cater for small conventions and house entire sport teams in the main building as the top floor consists of a comfortable lounge and private rooms. Each room has its own balcony, used to hide the air-conditioning units and providing an exceptional method of keeping western sun out of the rooms.

The building embodies a feeling of inclusiveness, while finishes are rough to comply with a rugged concrete and face brick exterior, reflecting Pretoria's heritage. The floating auditorium is used to create visual appeal towards the building, and the rest of the building seems to follow suit. The columns are treated with respect and provide a uniform rhythm to the building. The extensive use of glazing allows visibility from out of the building to all areas of the sporting activities around the building. The building is a good example of multiple functions grouped into a single building, where different groups are able to use the building at a time.



Fig. 5.18 Lounge on the top floor, with rooms on either side, each with their own balcony



Fig. 5.19 The strong sense of rhythm

### 5.5 Precedent study 5

Structure: The Women's Jail, The Constitution Hill,  
Johannesburg

Architect: Kate Otten Architects cc



Fig. 5.20 The building protrudes over the original jail wall.

The Women's Jail is part of the Constitution Hill precinct in Johannesburg. The building addresses a heritage building, being an addition to the original Women's Jail and the design transforms former symbols of oppression to one where human dignity is restored. The new building houses offices for the South African Human Rights Commission. The old building is integrated into the design by becoming the threshold through which one needs to pass to get to the new offices.

The building makes use of punctured Cor-ten plates that aim to mimic the steel bars of a jail. The cladding covers most of the building, creating a lighter feel to the building, while it serves as shading elements to diffuse sunlight on the east and western facades. The windows on the northern façade receive more attention with protruding wooden shutters providing shading from the summer sun. The building makes use of massive round concrete columns, creating an impression of the building stepping out over the boundary walls of the jail, symbolizing freedom from oppression. The swing doors in front of windows can open, and are also made from the punctured plates.

The building displays a dual façade, achieved using punctured metal plates, creating one-way passive surveillance from behind the plates similar to the Arabic Mushrabiya.

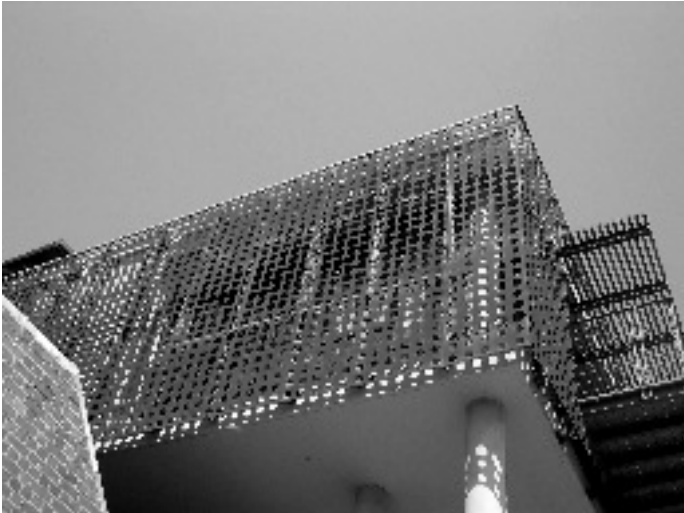


Fig. 5.21 Using perforated plates to play with light

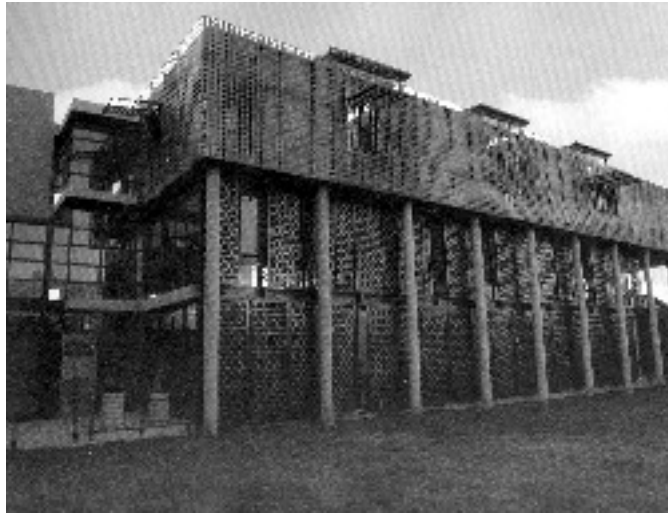


Fig. 5.22 Strong rhythmic columns and appearance



Fig. 5.23 Perforated plate details

## Chapter 6 - Urban Design Development



Fig. 6.1 The active pedestrian edge, New York



Fig. 6.2 Stadia framed by an active pedestrian edge, New York

## 6.1 Introduction

The city block is to be reprogrammed around a pedestrian strip (Shepherd Street) through the city block. The analysis of a sports stadium in New York was used as a point of departure, the project entails the use of a pedestrian walkway as an active edge to the sports field. Secondly a study of public precincts identified critical characteristics of such spaces, including the presence of passive surveillance, safety, permeability, visibility and a variety of program.

Factors considered will include the relationship between the existing buildings, new buildings and existing site forces to make informed decisions, driving the project towards the vision established in the problem statement. The development of the city block will inform the program and placement required of the building that is to facilitate the events.

The development of the city block is combined with additional research on urban design principles of an empirical nature, and the resultant process is mapped as it developed over three time-frames.

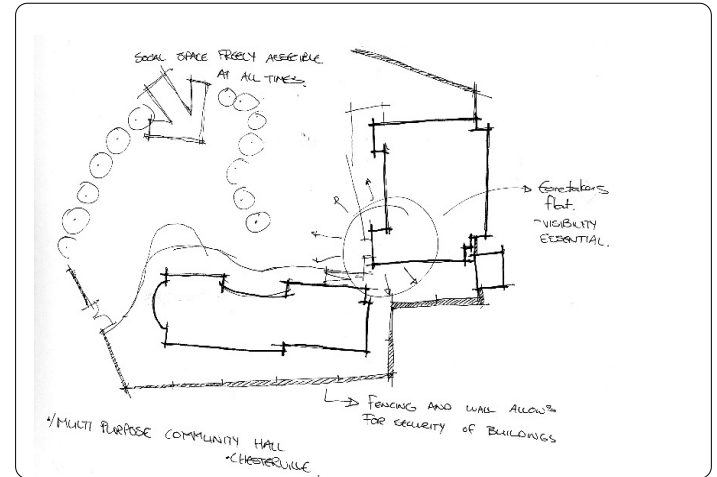


Fig. 6.3 Study of a public precinct, the Dorothy Nyembe multi purpose centre, KwaZulu Natal

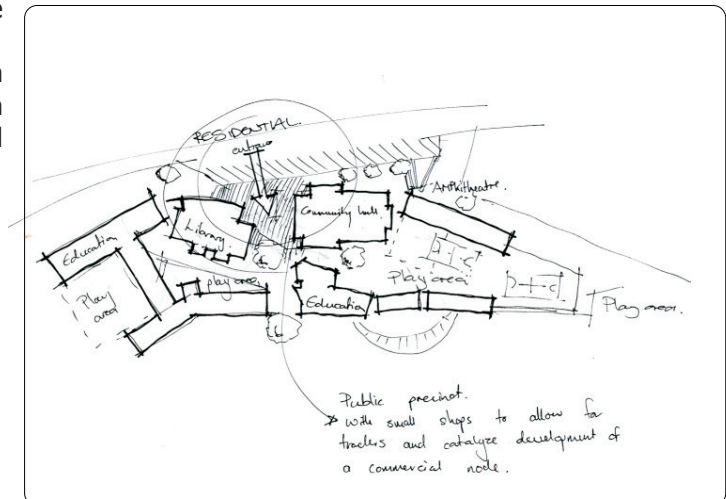


Fig. 6.4 Study of a public precinct, the Chesterville community centre, KwaZulu Natal

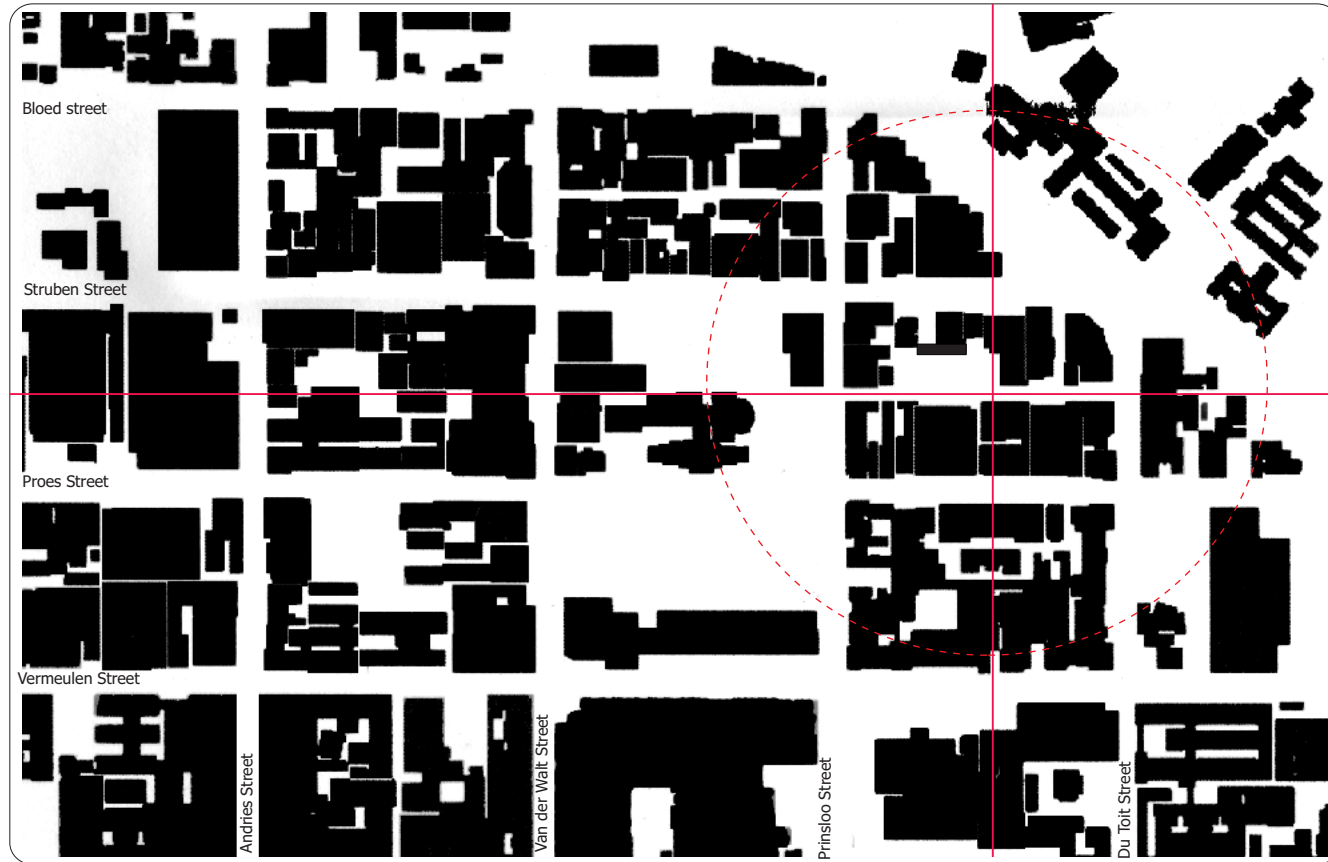


Fig. 6.5 Study area before intervention - scale 1 : 2500

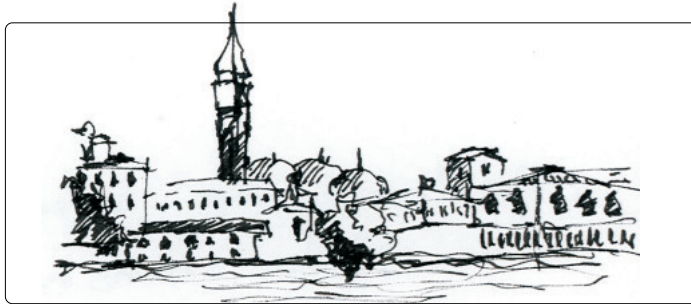


Fig. 6.6 The Piazza di San Marco

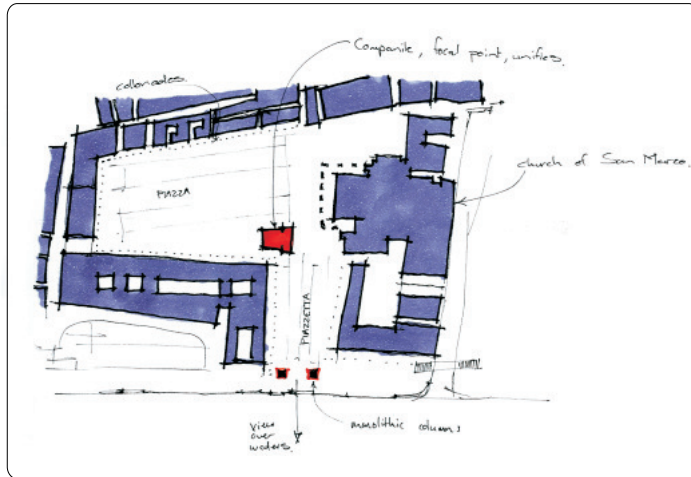


Fig. 6.7 Study of the plan of Piazza di San Marco

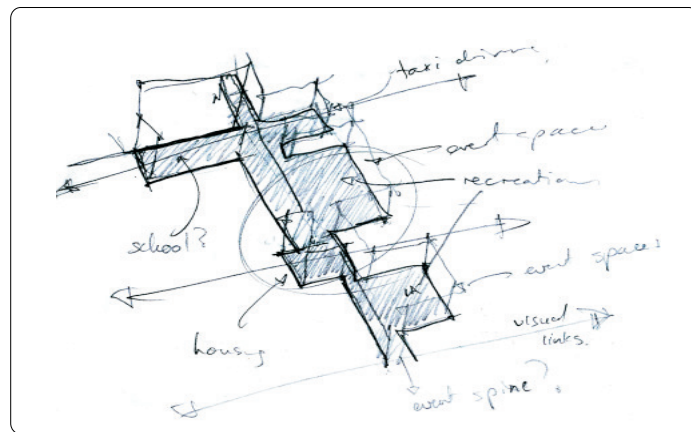


Fig. 6.8 Analysis of lost space in the city block

## 6.2 March - Lessons from the Piazza di San Marco

The piazza is an example of empiricist thinking, as the human senses are of main importance in the piazza. Over time, layering has created a space of choice and comfort. The square today provides "a living – and working – environment for thousands of people, a place of resort, a place to eat and drink, a place to listen to music, a place to shop" (Broadbent, 1990:49). The square found its origin as the frontage of the church of San Marco. It can be seen as a public boardroom, and provides the first in a series of public squares in the city of Venice (Broadbent, 1990:49).

The Piazza di San Marco consists of a Piazza and a Piazzetta, the two existing at an almost 90 degree angle to one another. Thus an extremely important element in the square is the Campanile, a tower that "acts as a focal point that unifies the irregular plan of the Piazza and the Piazzetta" (Broadbent, 1990:50). Apart from the Campanile, there are two monolithic columns of a smaller scale, which "hint at a screen which frames marvelous views to the South and prevent the space of the Piazzetta from leaking completely into the canal" (Broadbent, 1990:51). The Piazza appears to be the result of happy accidents over time.

A human scale is achieved in the Piazza by the presence of colonnades at the bottom floor of most of the buildings (each three stories high) framing the Piazza.

### 6.3 Application

The city block is to be a place of rest, away from the hustle of city activity. The terrain is thus viewed as an under-utilised space that can be positively redefined, to this end all present lost space is identified.

The proposed pedestrian network discussed in 4.6 creates the opportunity of establishing a square in within the city block that forms part of a network of public spaces in the city. The terrain and subsequently the public precinct, is however conceived as a strip rather than a square. The strip is defined along Shepherd Street, the new pedestrian strip, framing the view of the Union Buildings towards the East. The newly identified public space exists as unprogrammed space.

Emphasis is placed on strengthening the urban fabric on the street edge, while permeability is ensured by adding a third entrance. A new building is introduced to define this entrance and keep the space from spilling into the street. The addition of new buildings into the city block enrich the layers of Palimpsest on the site.

A tower element is integrated in the intervention, serving as a focal point in the event strip to attract more people into the site for social exchange. The tower functions as a vital pivot point around which all elements of the site are ordered.

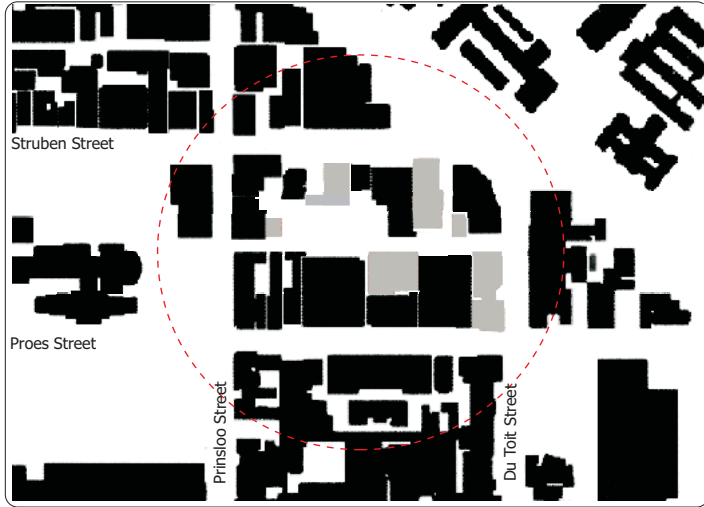


Fig. 6.9 Buildings to be demolished

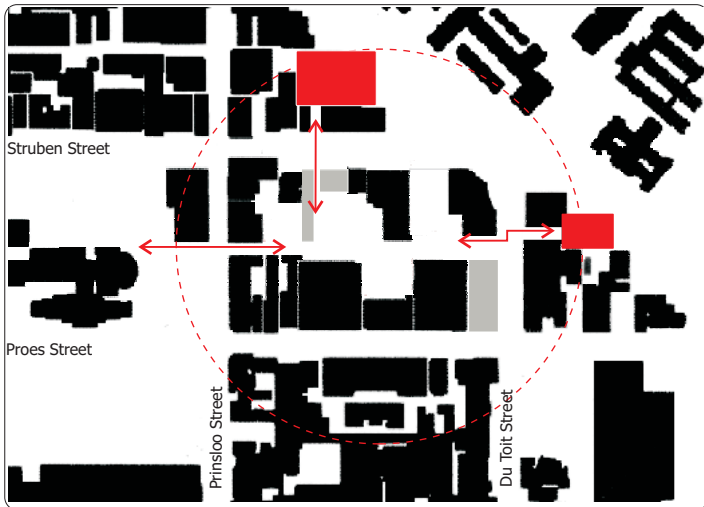


Fig. 6.10 Diagram showing the pedestrian network between social spaces

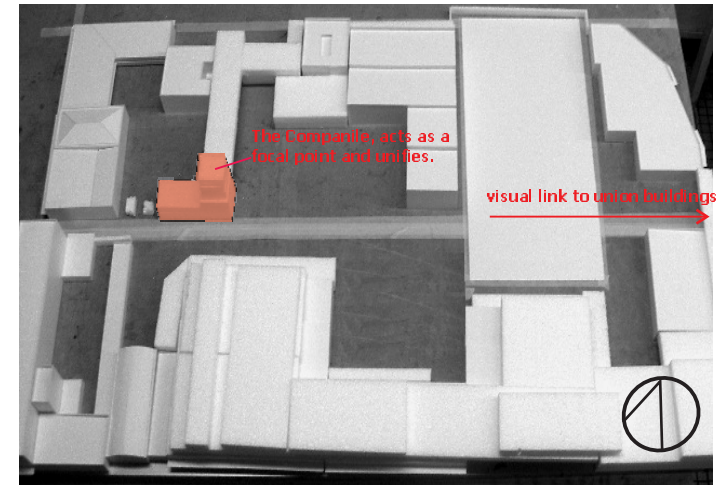


Fig. 6.11 The tower element and visual link to the Union Buildings

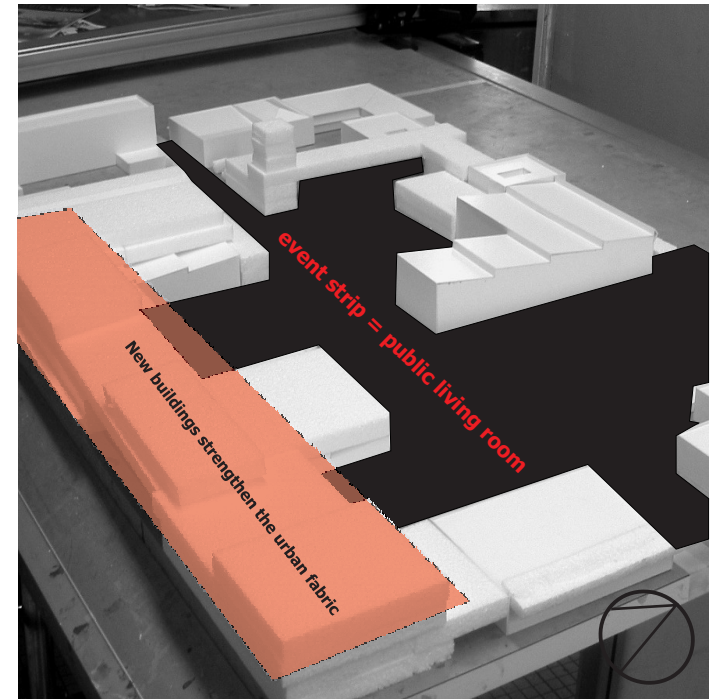


Fig. 6.12 Open space in the city block is visualized as a recreation spine, a place to shop, relax and play, spend some time with friends, get away from the frenzy of the street



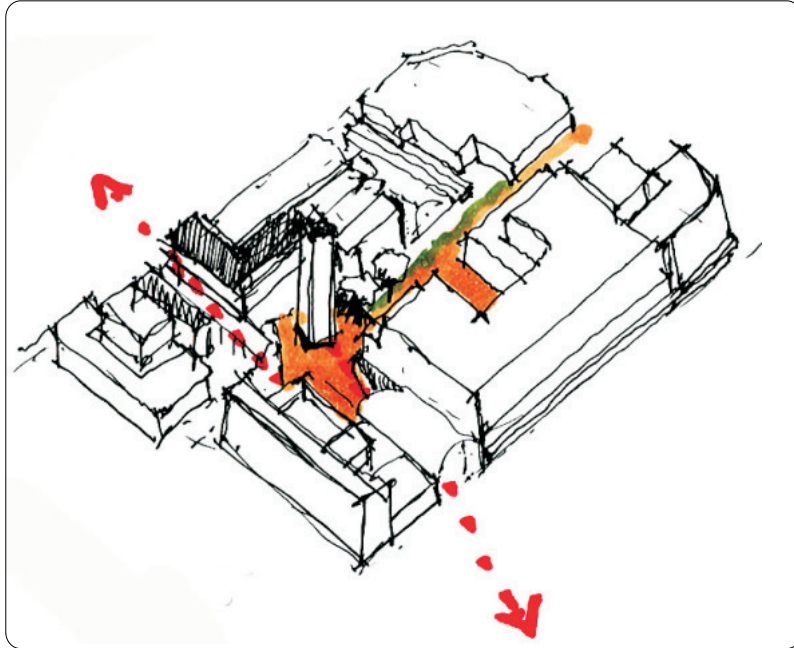


Fig. 6.13 Drawing exploring increased permeability into the site



Fig. 6.14 Jane Jacobs - Streets for living in

#### 6.4 April 2007 - Jacobs and Newman

An empiricist thinker, Jane Jacobs found her inspiration for urban design in the streets and squares of villages, identifying the elements of a city that make it habitable and provide environments for urban living. She talks about the importance of passive surveillance and the network of control exercised by people that treasure their environment, and identifies elements that give a street liveliness (Broadbent, 1990:143):

1. Clearly defined public and private space
2. Passive surveillance
3. The presence of people outside their dwellings

Jacobs advocates the mixed-use principle and identifies the need for people to have choices, resulting in the advantage of having 24-hour use of a site. Thus Jacobs identifies diversity as being an essential ingredient for urban living and she identifies 4 basic rules for diversity (Broadbent, 1990:145):

1. The need for more than one primary function in a destination (e.g. working and eating) as this will ensure the use of the facility at different times.
2. A limitation on block length, roughly 300m
3. The co-existence of buildings of different ages, these allow for different economies in one area, the MacDonal'd's vs. the second-hand bookstore.
4. And lastly - a high concentration of people on the street.

Often in opposition to Jacobs, Oscar Newman backed his arguments up with statistical analysis. Newman was primarily concerned with defensible space (Broadbent, 1990:149). Defensible space, or appropriated space, is a space "which can be employed by the inhabitants for the enhancement of their lives, while providing security" (Broadbent, 1990:149).

Mainly, he argues that people need to take ownership of areas to make them safe, and for them to take ownership they have to be designed properly. Thus, Newman identified several design principles:

1. Intensify tenant surveillance of grounds
2. Differentiate clearly between public, semi-public and private areas.
3. Increase the sense of proprietorship felt by residents.
4. Remove the stigma of public housing.

### 6.5 Application

An architecture of safety and security is explored. Another pedestrian entrance is added into the site via Proes Street, creating a safer environment both in the street and in the precinct. A new residential component is added onto the existing warehouses on Proes Street, increasing passive surveillance and adding community orientated program to the intervention. The introduction of housing into a multi-use public precinct should remove the negative connotation with public housing in South Africa. The structure of the warehouses are analyzed and deemed as sufficient (see Appendix C) These housing units provide passive surveillance on both Proes Street and Shepherd Street.

Additional program is introduced via a small soccer field and basketball courts into one of the abandoned warehouses, supported by a sports and education facility. More program defined in the problem analysis include incubation stalls that allow entrepreneurs to further their businesses. The warehouses onto which the housing units are added are ideal for this purpose as they are easily reprogrammable and provide interaction with pedestrians at ground level. Additional characteristics of adaptable buildings identified by Brand (1995:32), represented in these warehouses, are the six s's: adaptable skin, services, structure, site, space plan and stuff. These stalls activate the edge towards the street and into the public space.

Spaces in the event strip are defined, ranging from semi-private spaces for the newly added housing units to semi public spaces for general use. These spaces are deliberately kept unprogrammed to cater for the program that will happen here due to the presence of the several agents in the area.



Fig. 6.15 Buildings to be demolished or opened up



Fig. 6.16 Buildings added and event spaces defined

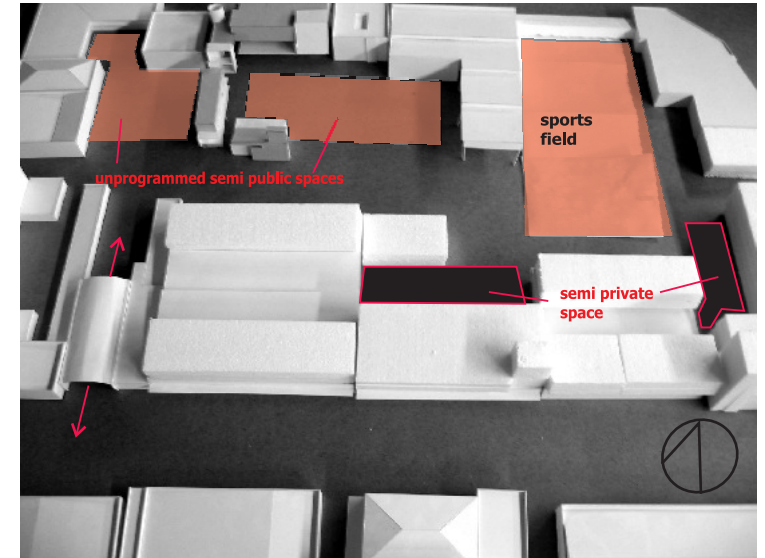


Fig. 6.17 Exploring permeability and defined spaces to increase safety in the block and the surrounding area

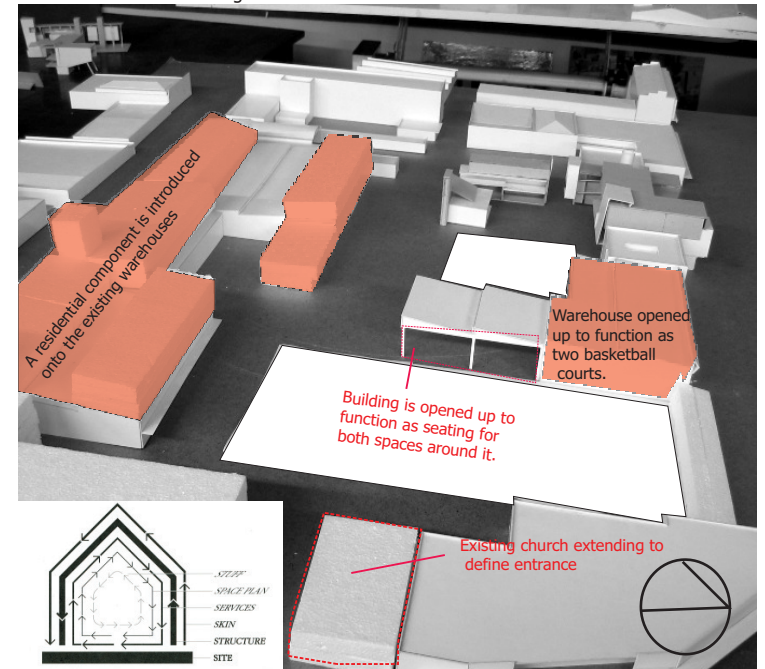


Fig. 6.18 The six s's

Fig. 6.19 New program is introduced

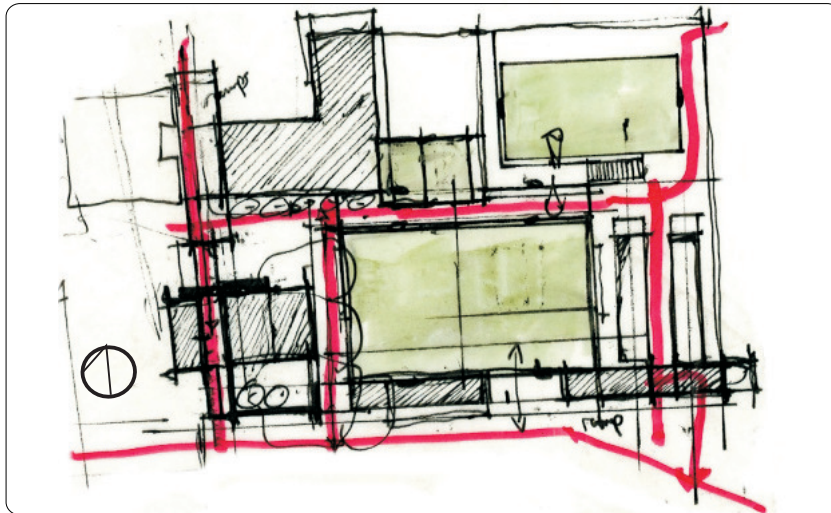


Fig. 6.20 Exploring routes that serve as movement spaces

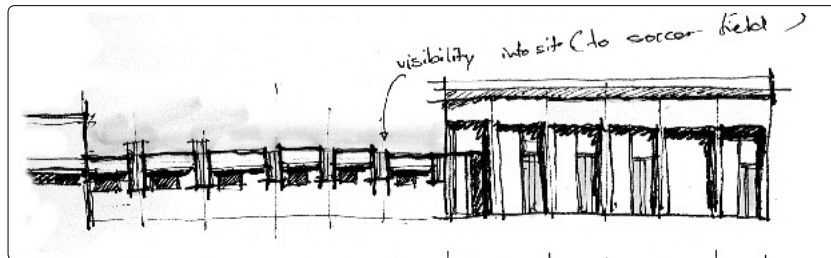


Fig. 6.21 Conceptual drawing of shops as an active urban edge



Fig. 6.22 Usasaza Secondary School showing the active urban edge

## 6.6 June - Louw and Noero

Cooke (2005:32); refers to several parts of immense importance with regards to urban space making. In her interview with Piet Louw, the author discusses as a point of departure the creation of distinctive space. Distinctive space that has a strong sense of enclosure, yet strong openings or gateways leading to surrounding spaces or buildings. There are clear boundaries and movement edges.

Secondly there is a hierarchy and variety to social spaces, with each space relating to a different scale of urban phenomena. Different types of social spaces include in-between space and directional spaces (Cooke, 2005: 33).

Thirdly the distinction between foreground buildings – these having distinct features of scale, articulation and form amongst others, yet conform strongly to context – and background buildings whose main roles involve defining spaces and edges. They create an overall rhythm and often bring into being those vital sociable zones that connect inside and outside (Cooke, 2005:33).

As an overall strategy, spaces need to accommodate the everyday, which is often as simple as providing public furniture in various forms and ensuring different spaces allow for different weather conditions and type of activities. These are in no way deterministic, but provide a platform for variety. Other factors include passive surveillance, density, and ensuring spaces deal with either movement towards a certain goal or stationary activity (Cooke, 2005:34).

In the Usasaza Secondary School, Joe Noero creates an active urban edge by framing the playground with a wall of shops. The shops are used to sell to pupils and pedestrians on the street.

### 6.7 Application

The public spaces are defined more clearly, seating around the main public spaces serves to define the pedestrian walkway (Shepherd Street) and creates a stronger sense of enclosure for the public spaces. Adequate seating in both shaded and sunny areas are provided for different weather conditions.

The need for servicing new and existing buildings on-site is addressed by adding a service and parking space, yet the arrangement remains informal to maintain the idea of multi-use spaces. A climbing wall is added to the tower element, creating a gateway to the public space, creating a strong barrier to vehicular traffic.

The nature of the intervention is to promote sport at grass-root level, creating the opportunity for individuals to develop basic sports skills that function as a stepping-stone to bigger opportunities. To this end the soccer field is made smaller, as the program shifts to more urban sports activities. At this point the concept of multiple use sport fields is researched, resulting in the two public spaces being able to accommodate a wide variety of sports activities, including soccer, basketball, netball, hockey, touch rugby, cricket (six-a-side), hockey and volleyball. For most of these sports the public spaces combine to ensure more than one court is available for a specific type of game. This is done to ensure that sport events of a significant nature can be held at the site.

The field to the eastern side of the site is programmed as a sports field as such, fitted with Astroturf for easy maintenance, also serving as an artificial grass space. The western space is to remain a reprogrammable space, allowing for sports events but also for events that occur due to the site forces and agents in the urban fabric. Thus the development can cater for informal and formal events, music and sport events and church bazaars. As mentioned before, the design is to create options for the community and other potential users.

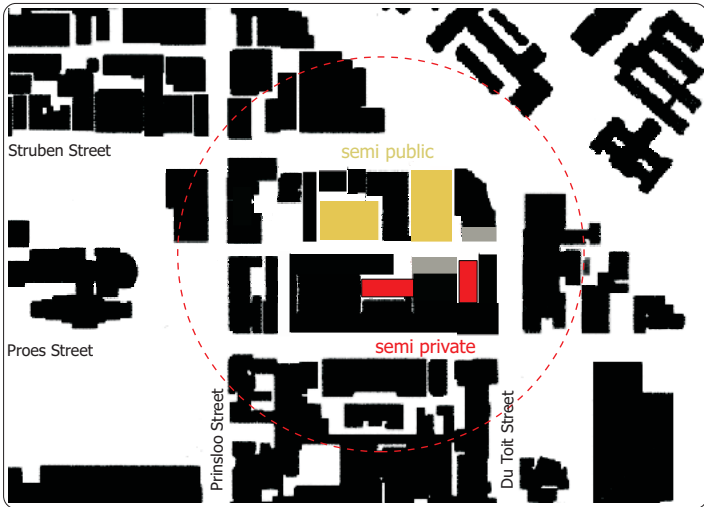


Fig. 6.23 Buildings added and spaces redefined

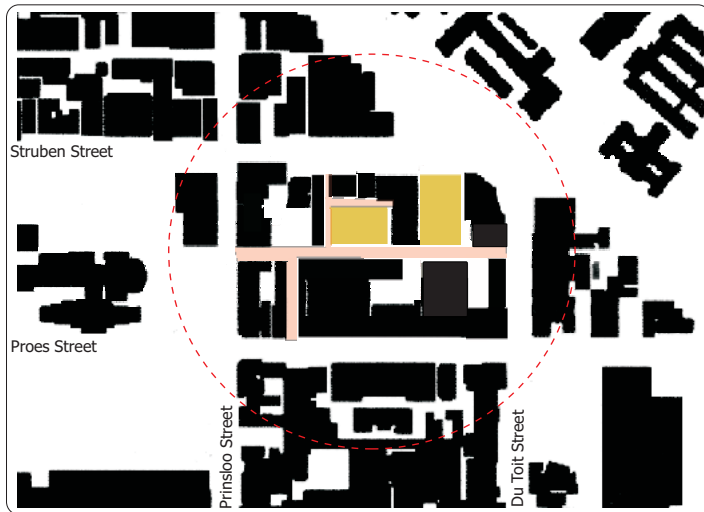


Fig. 6.24 Movement through the site

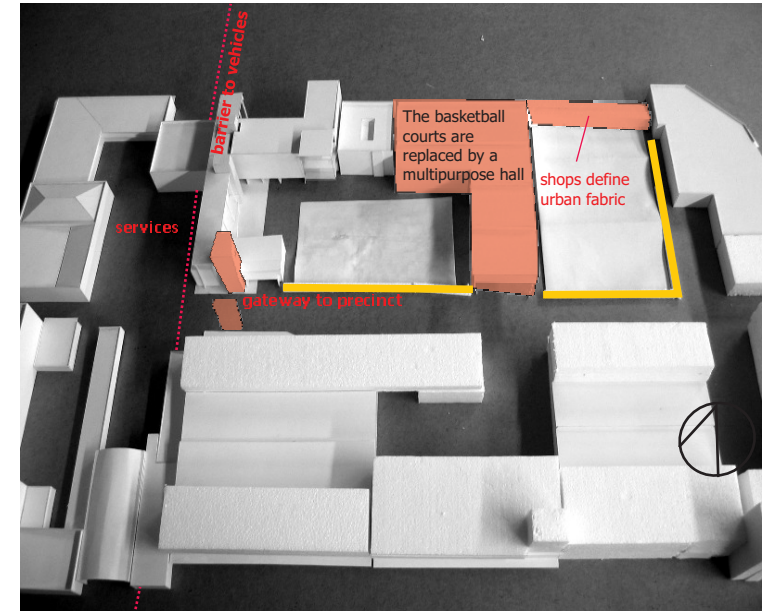


Fig. 6.25 The precinct is off limits to vehicles, except for the service area

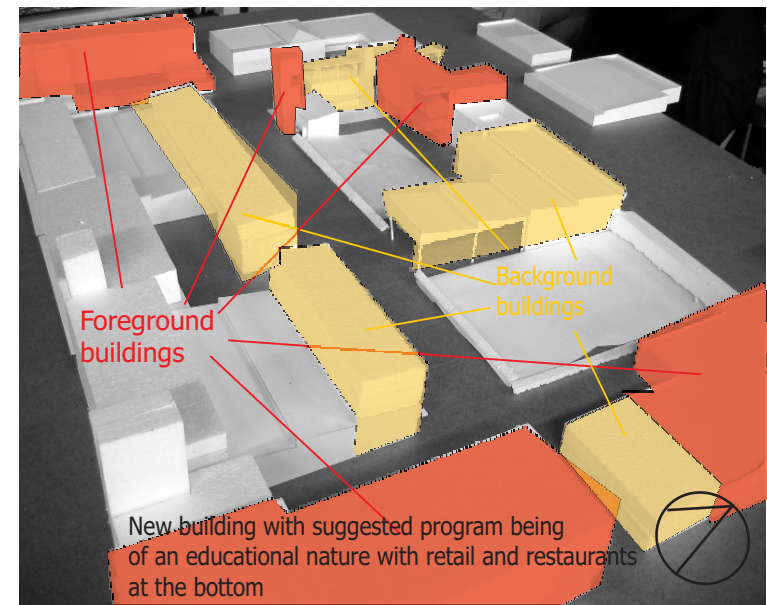


Fig. 6.26 Background and foreground buildings

## 6.8 Conclusion

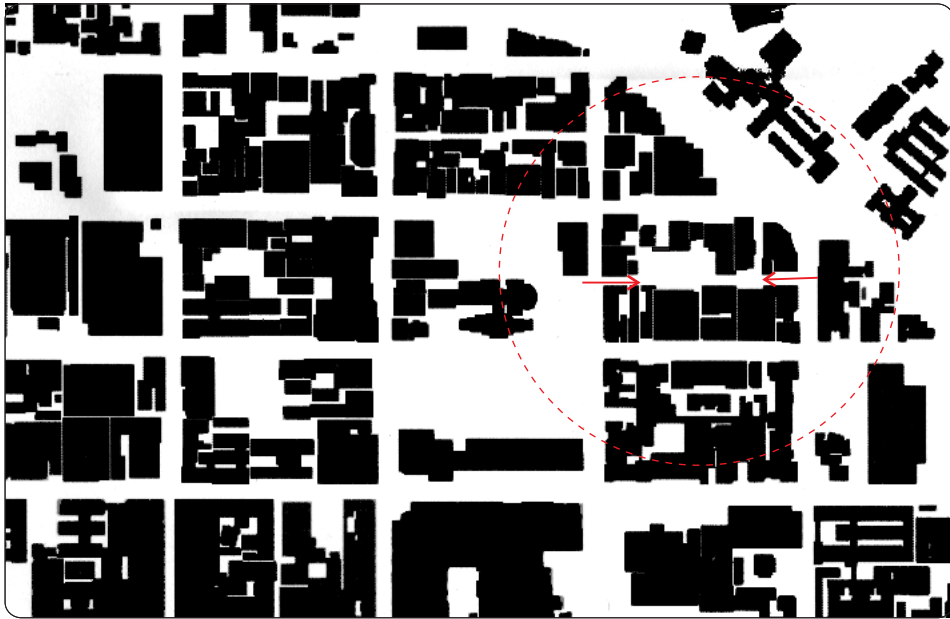


Fig. 6.27 Before intervention - scale 1 : 2500

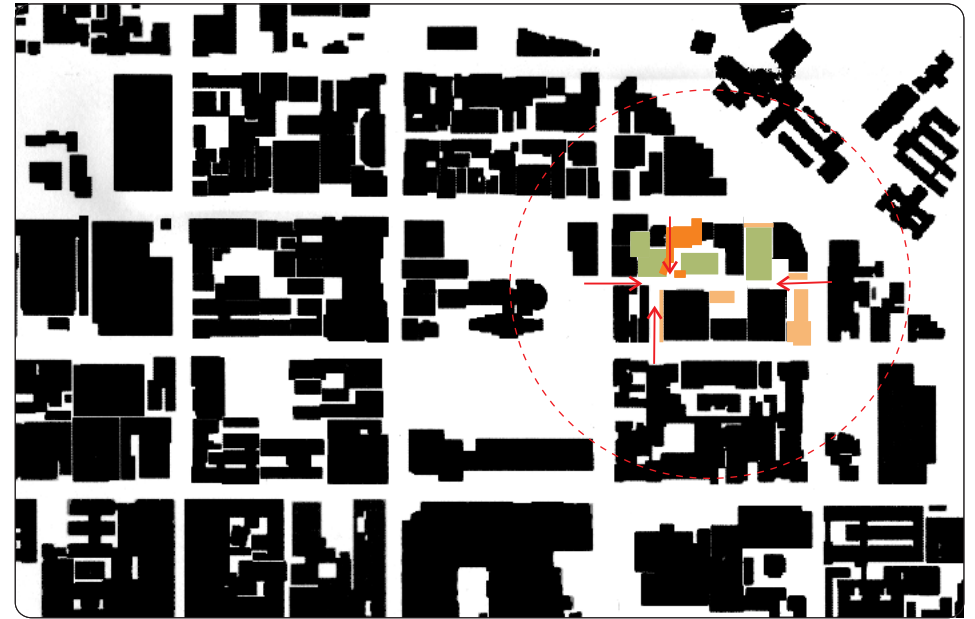


Fig. 6.28 After intervention - scale 1 : 2500

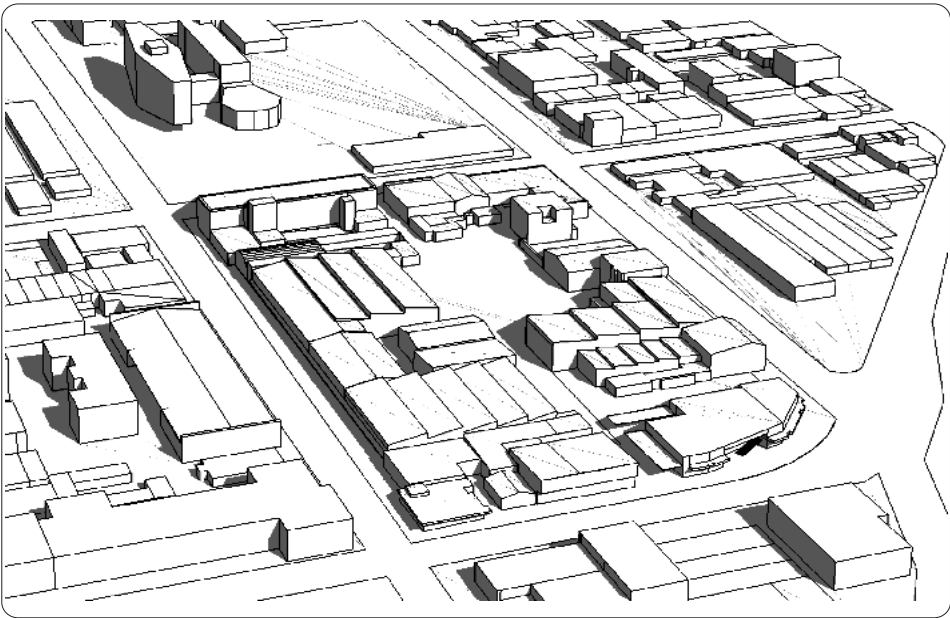


Fig. 6.29 Aerial Perspective before intervention

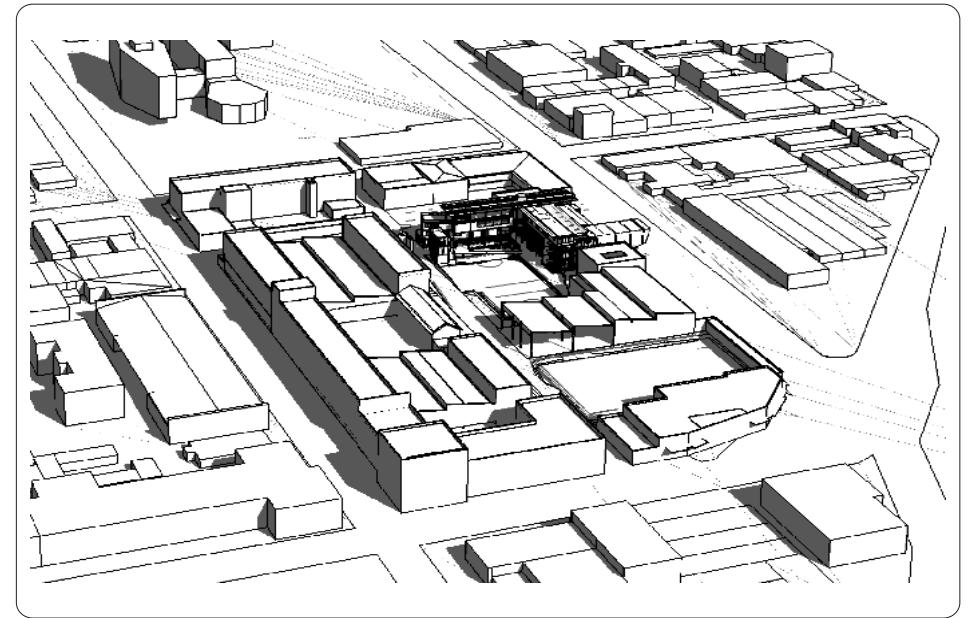


Fig. 6.30 Aerial Perspective after intervention

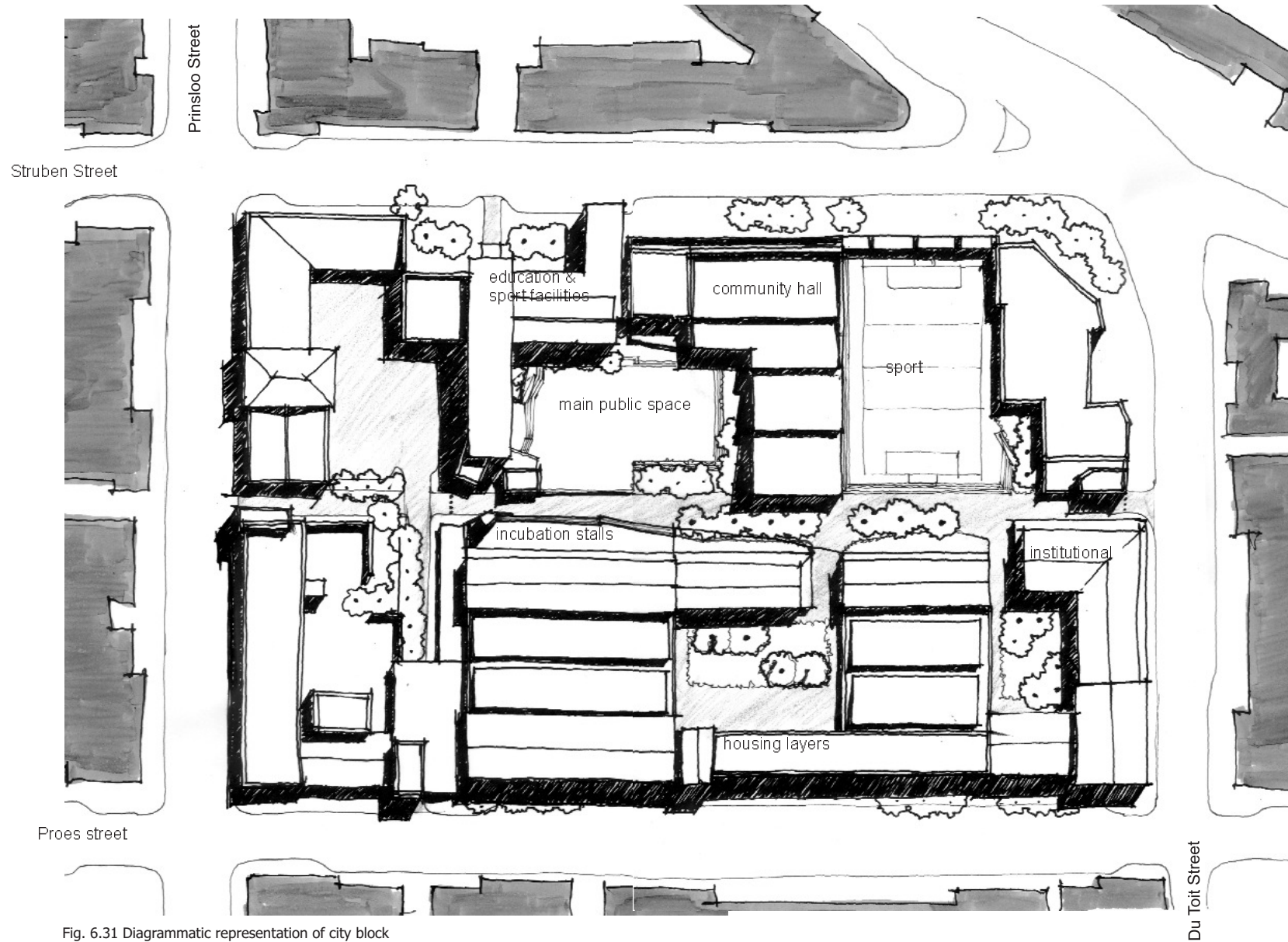


Fig. 6.31 Diagrammatic representation of city block

## Chapter 7 - Building design development

## 7.1 Introduction

Now that an urban strategy has been designed, the focus shifts to the implementation of a new program in the city block. Sport and the related facilities were identified in the theoretical premise as having the potential of uplifting and uniting a community, along with potential education facilities. Thus the new program is determined by the need of the above- mentioned facilities and the ideals of the urban strategy.

Architects should at all times consider the vital element of safety, even more so in the design of public spaces. The need of passive surveillance results in the incubator retail spaces and housing developments that are suggested in the urban strategy. The manual for social crime prevention, published by the WNNR (Kruger, Landman & Liebermann, 2001:42); suggests the need for mixed land use, ideally with 24-hour use of facilities. People present at all times will also curb or limit illicit activities, such as illegal dumping. From the precedent studies it is also clear that unprogrammed space, if not adequately served with public infrastructure, ceases to be viable, sustainable or functional.

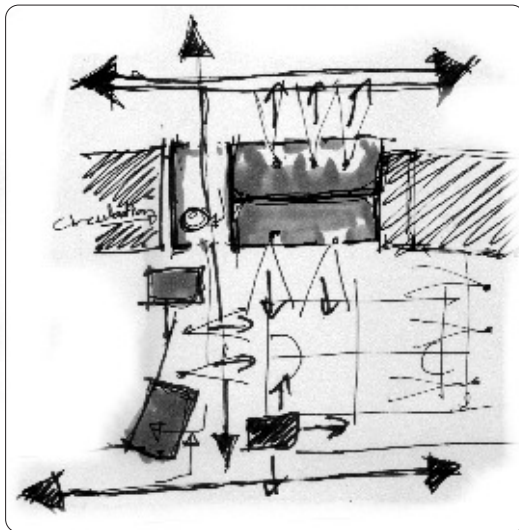


Fig. 7.1 Diagram of the building

## 7.2 A sense of community

The mention of community building usually brings to mind bland community halls and recreation centres, with restless or homeless individuals meandering around in a stupor. The precedent studies suggest the possibility of combining these buildings with an urban park to create more responsive environments, as in the case of the Landshaftspark, where introducing new functions into existing structures results in spaces that comfort and provide a feeling of well-being.

In a study on community buildings Pearson (2002:76); reveals that designers often mistake the role of the community building. The building should be a connection point in the city, it should reach out and strengthen urban elements in the environment. But how does one pull together the fabric of the city? Pearson (2002:78); comes to the conclusion that one needs to either create new outdoor spaces or reshape existing ones, adding an architectural interface that acts as a hinge between the old and the new. A community building needs to enhance the neighbourhood, placing architecture of meaning within. This can be done by recalling shapes or material or building styles in the area.

Saunders (2006:3); in an article on successful community buildings, identifies compatible diversification in use of buildings as an integral element and states that "...key to the process is determining which types of facilities are best suited to mixed uses and what type of functions are compatible". As shown above in the discussion on the program of the building, the intervention reflects sufficient diversity. Short and Lees (2006:4), in an article on South African community buildings, warn that the approach to community buildings is often standardization. While this approach allows for time and professional fee-savings, the disadvantages are significant as buildings are often unresponsive to their site and one falls into a mindset of using a single approach to solving different problems. "These buildings are often located at centres of new growth and thus provide the ideal opportunity of establishing a communal identity in form and expression" (Short & Lees, 2006:4).

The above arguments recognize the need for identity and integrity in community orientated buildings. Openness and transparency are characteristics that come to mind. The building needs to be inviting, warm and accessible. It should establish a connection with its surroundings, present the public with to a "living room". The building was conceived with this idea in mind.



### 7.3 Building edge and entrance

The placement of the building as investigated in the urban design proposal provides several opportunities relating to the final placement.

Firstly, the building needs to define the urban edge, reinforcing it while respecting the neighbouring buildings and the urban edge of the block as a whole. This results in the building placed a slight distance away from the edge of the street, picking up the edge defined by its neighbour to the west (see fig 7.2). This decision to respect the neighbour is reinforced by the informal gathering space that currently exists in front of the building, creating a threshold on the city street. The space becomes the ideal location to replace the ill-defined bus stop a few metres up the road. This will also provide an ideal drop-off point when masses of people arrive to partake in events in the public precinct. This newly defined threshold also reinforces and acknowledges the importance of the neighbouring entertainment precinct towards the north of the site.

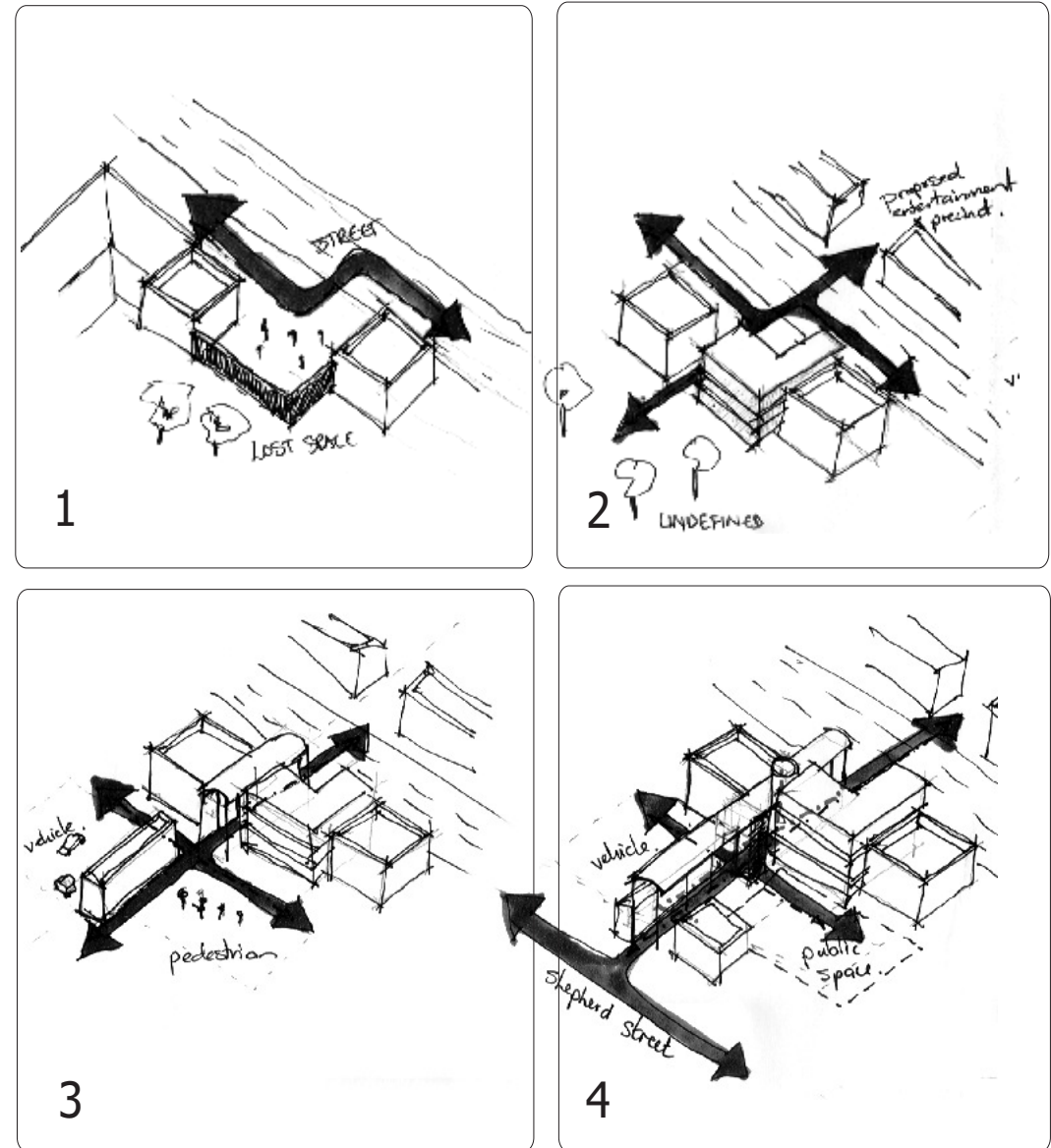


Fig. 7.2 Diagram illustrating the positioning of the building, and how the design influences the flow of pedestrians.

#### 7.4 The Kunsthall

The Kunsthall by OMA provided effective food for thought. The building is a transitional building, creating a connection to lost space. The space in connection is a park six metres below a the pedestrian street frontage (Koolhaas & Mau, 1995:440). The building reinforces the connection between the two, becoming a threshold whilst exposing the individual passing through the building to activities occurring within the building. It is a building that explores circulation through space where little distinction is made between circulation and exhibition space. The building is cut by a ramp which provides the circulation and connection between the road and the park. OMA thus reprogrammed the area by creating a connection whilst informing.



Fig. 7.3 Transition to the park

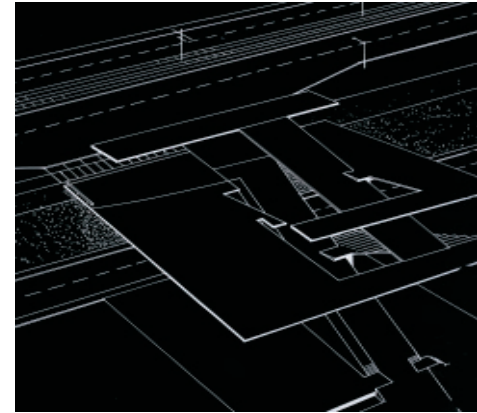


Fig. 7.4 Diagram of the Kunsthall, showing the movement through the building



Fig. 7.5 Kunsthall at streetlevel



Fig. 7.6 Street Elevation

## 7.5 Architecture of transition

Thus, the building needs a transitional space that functions as a threshold whilst exposing the individual passing through the building to activities occurring within the building. This space can then serve as a focal point around which the building hinges, being the foyer of the building.

The foyer is a space that informs the public passing through of the opportunities presented to them by the building, as well as showcase previous success stories of individuals who have aspired to become great success in society. As a starting point this would be the celebration of previously disadvantaged individuals using sport to uplift themselves. The idea is to inspire and motivate, reinforcing these ideals every time the individual passes through this foyer into the public space.

The foyer also adds the necessary measure of security to the building with all the circulation occurring at this point. This can also act as a control point to this particular entrance to the site. The building thus symbolises the moving from the chaos and confusion of the city to the more secure public precinct.

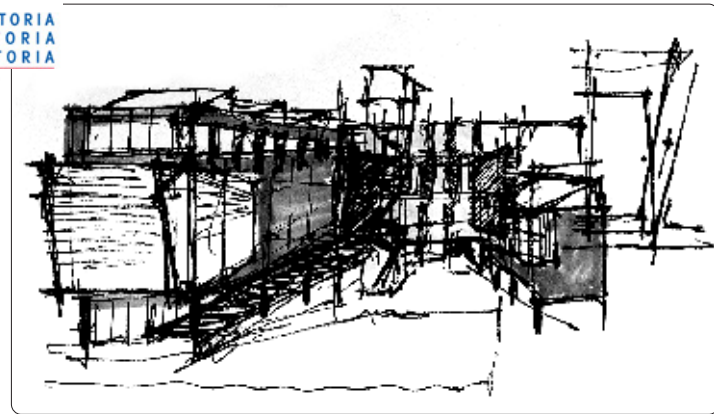


Fig. 7.8 Exploring the form of the building as inviting /



Fig. 7.9 Model exploring the concept of transition

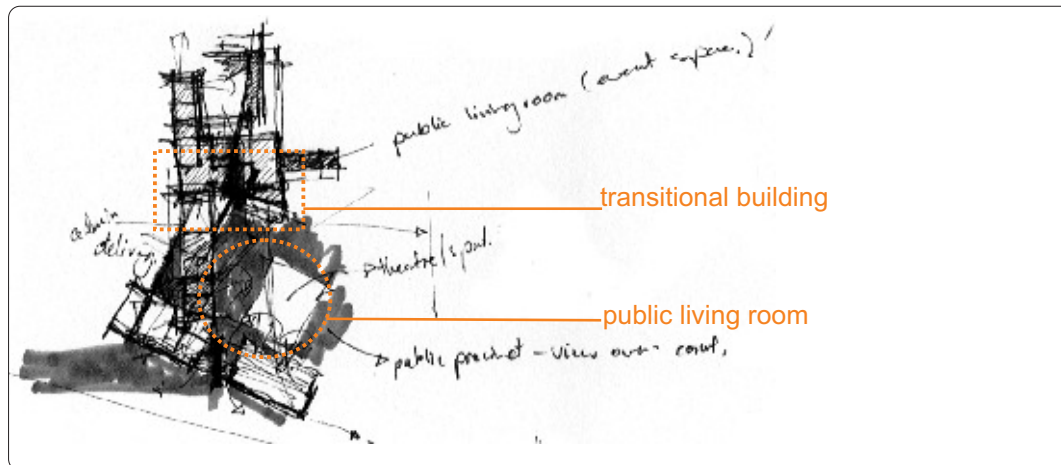


Fig. 7.7 Diagram illustrating the concept of the living room space behind the building as a foyer

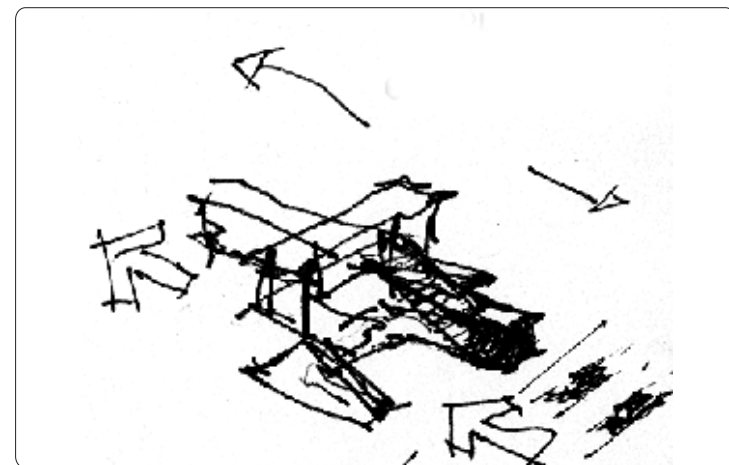


Fig. 7.10 Diagram of movement from street to precinct through the building

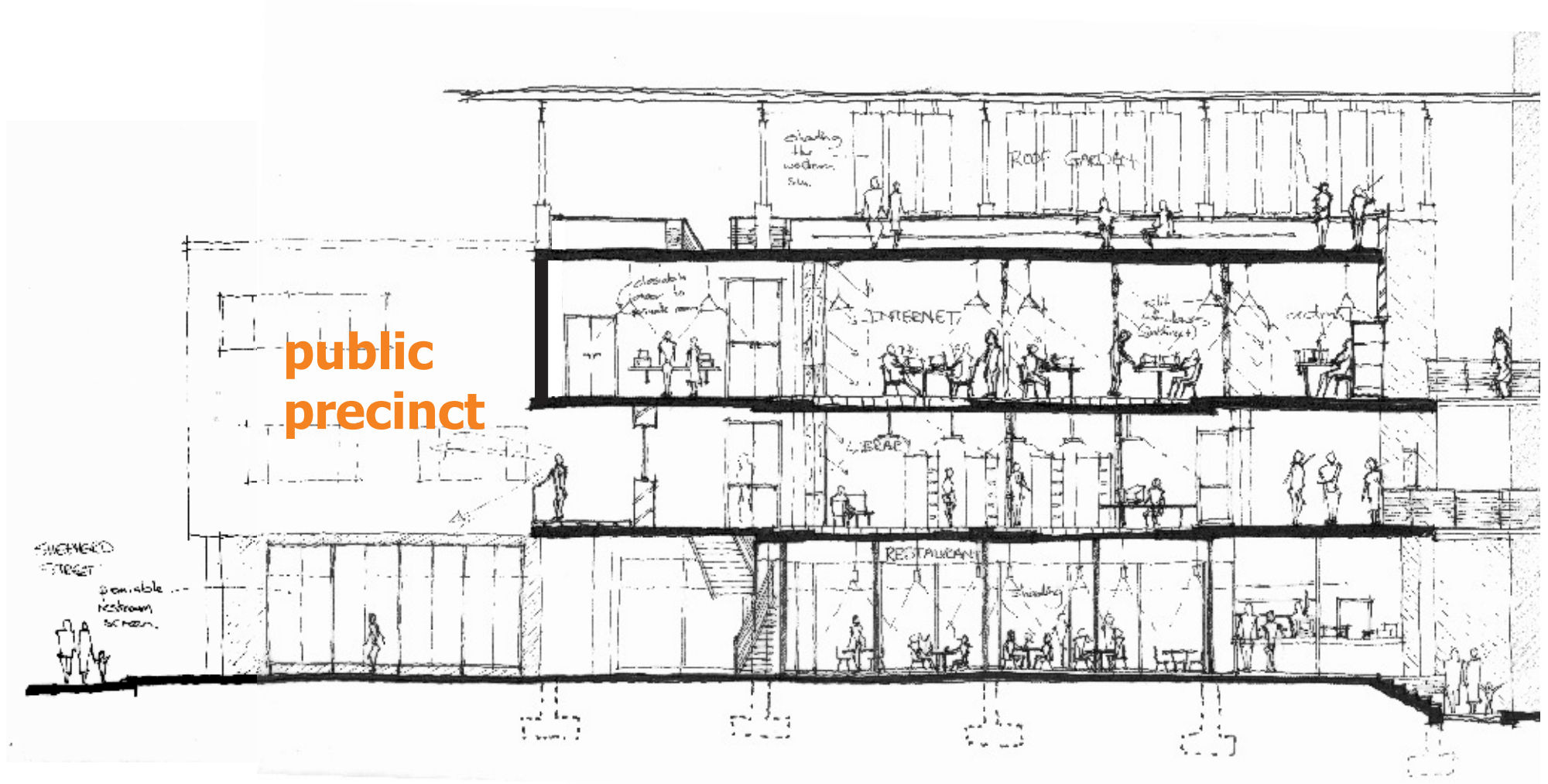
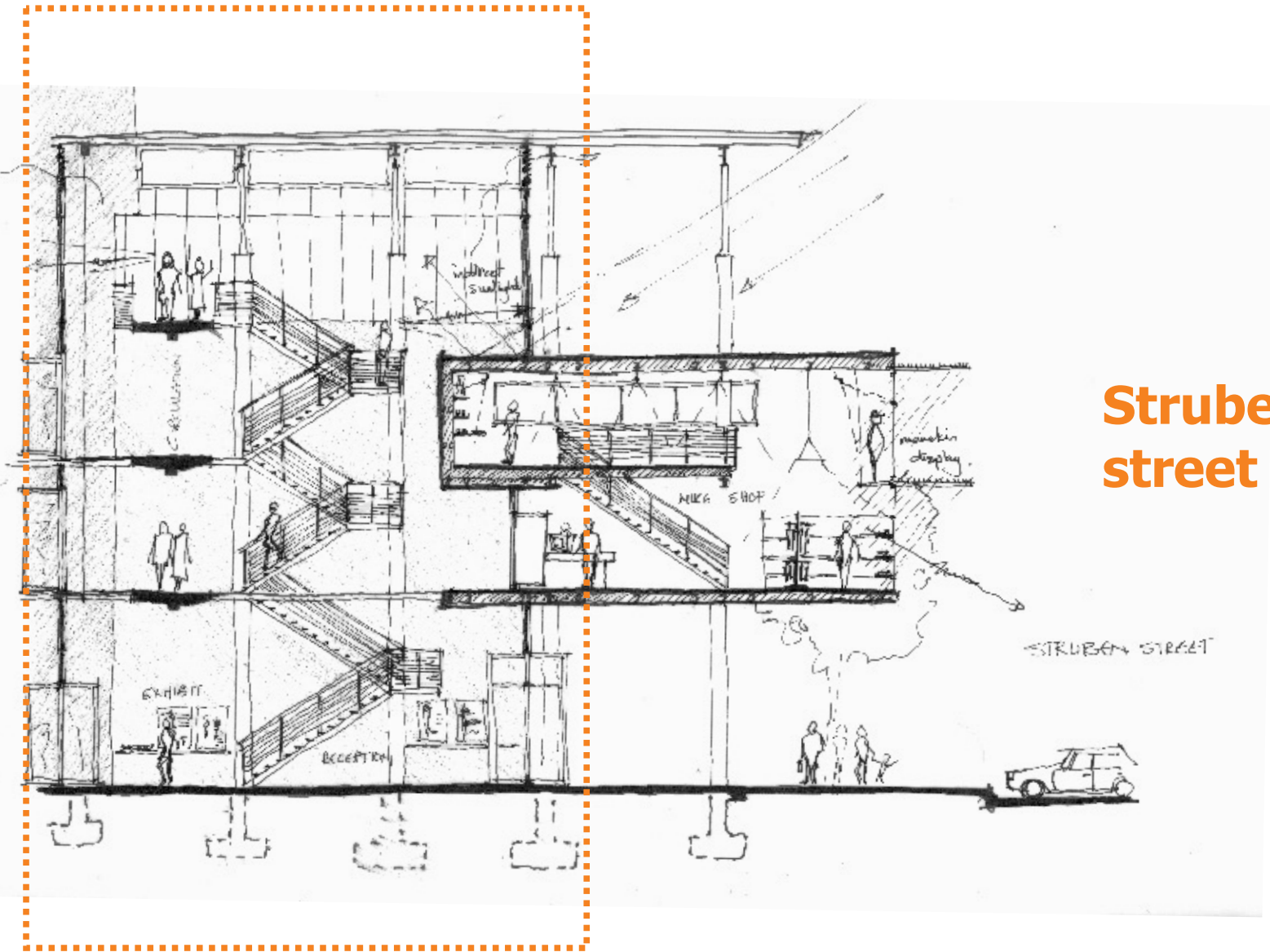


Fig. 7.11 Sketch depicting the building as a transitional space, providing the connection between the city and the public precinct.

# Foyer = Transition



**Struben  
street**

## 7.6 The viewing platform

The building is conceived around an event space. As discovered in the research of sport as a community builder, the social interchange as a result of sports events became a recurring theme. The opportunity arose to use the building to define the event space and at the same time become a platform from which to view the action. Thus again, one has the opportunity to fuse the different elements of the building programme together. Cyclists in the gym are able to observe the public in the event space, while a viewing platform on the first floor in front of the library will provide prime seats for events. Again, the possibility is there to expose individuals to information and opportunities available to them. A roof garden allows for spectacular views, while the bar, aerobics hall and dance floor are all exposed to whatever is happening in the public precinct. The whole building thus becomes a viewing platform for events, without resorting to obvious stadium typology.

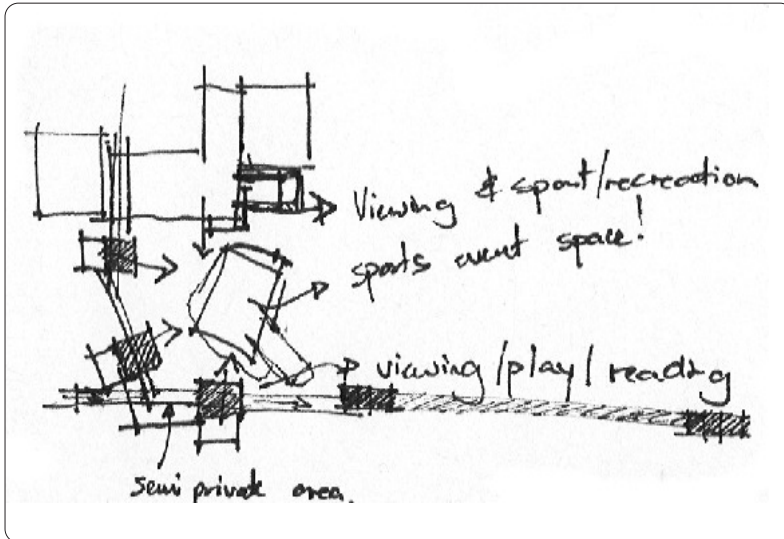


Fig. 7.12 The building explored as a viewing platform

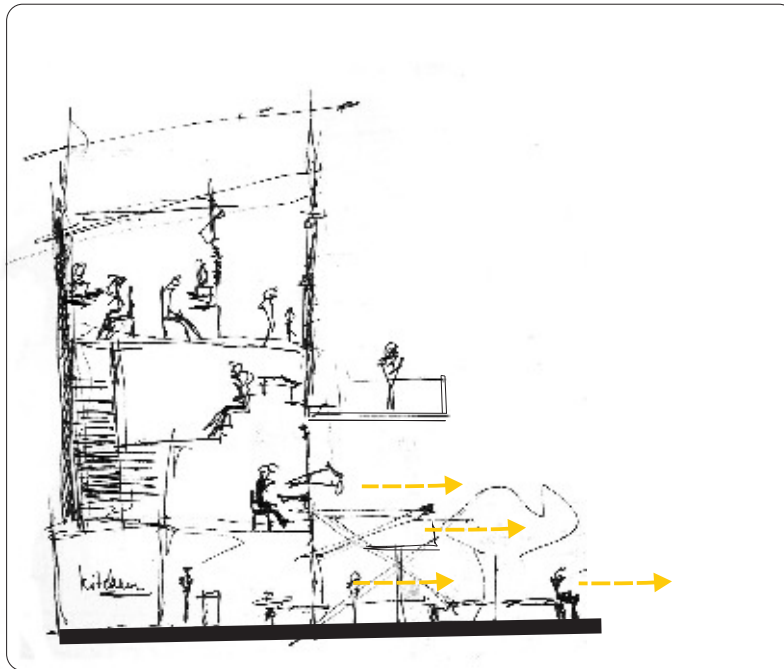


Fig. 7.13 Views onto the public precinct from inside the building.

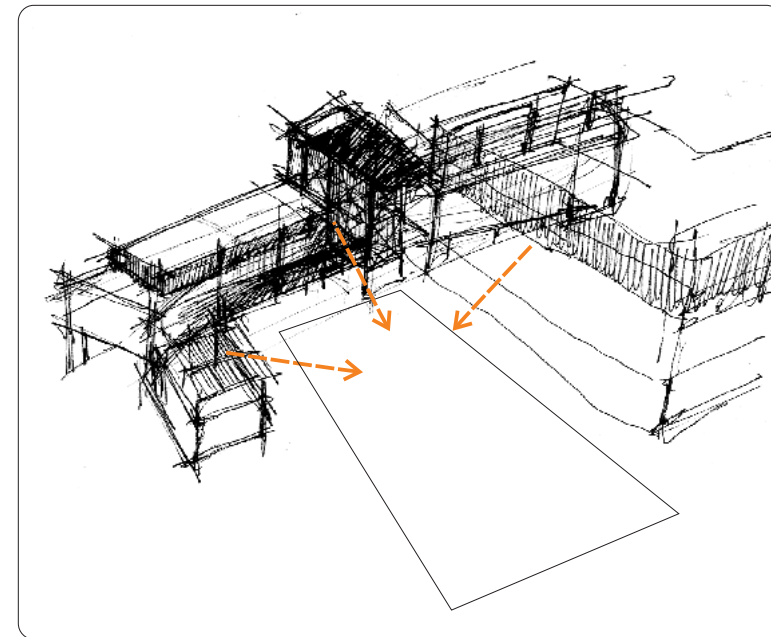


Fig. 7.14 Exploration of building mass generated by the concept of the viewing platform



Fig. 7.15 Stadium typology of Sumo wrestling

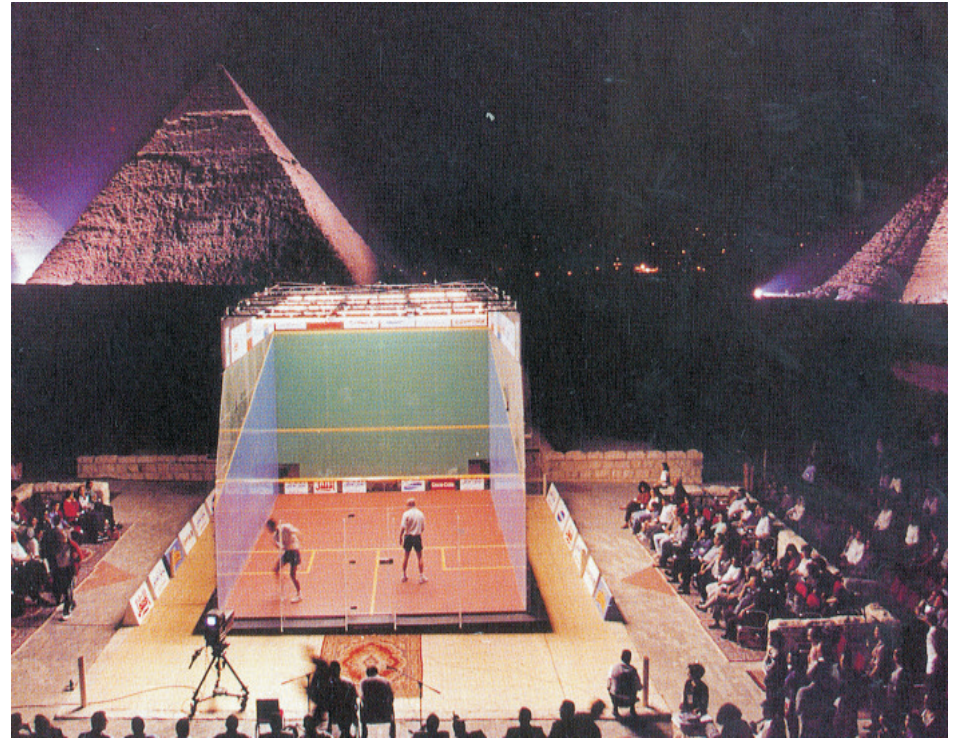


Fig. 7.16 Squash in Egypt

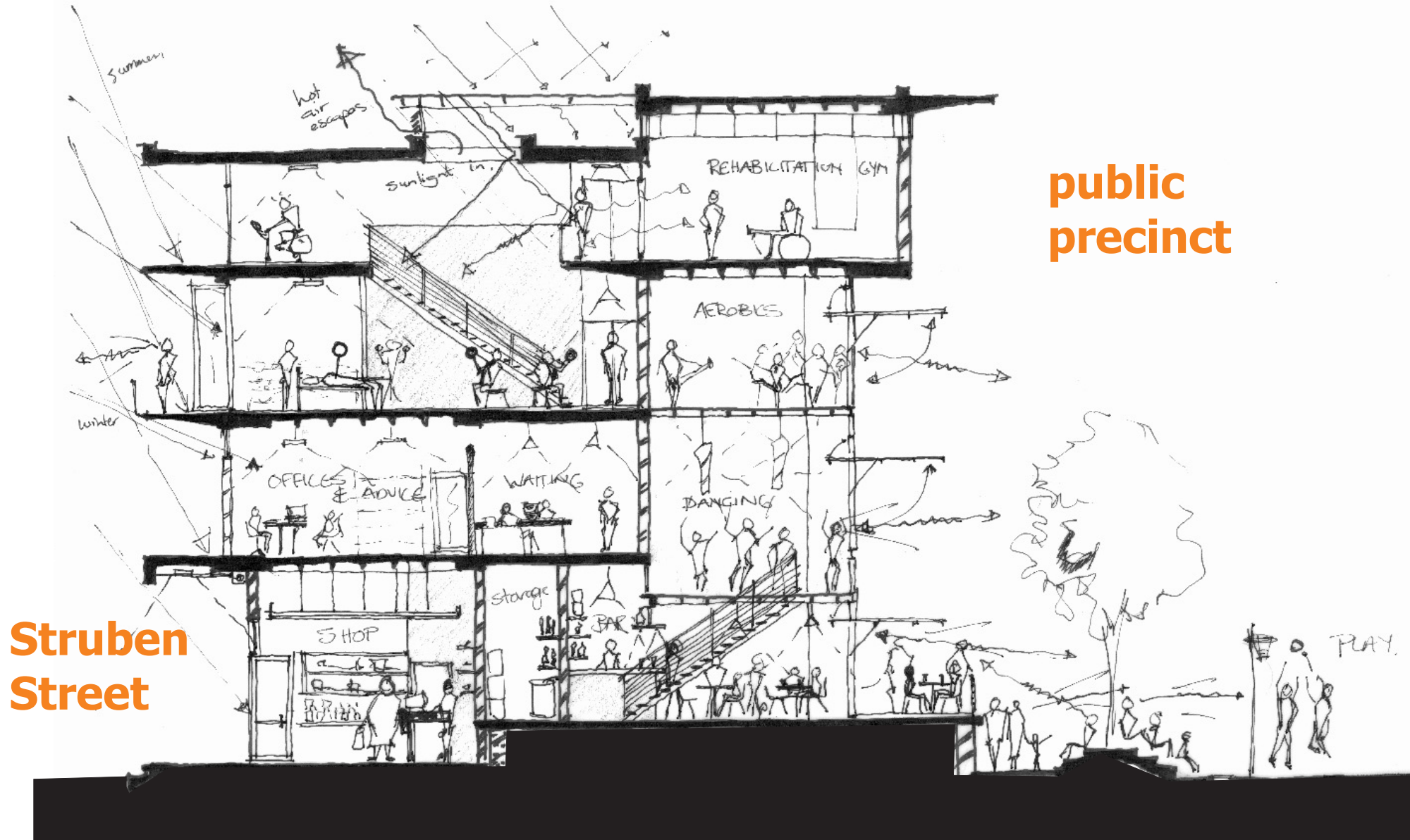


Fig. 7.17 Drawing exploring the building as a viewing platform towards the street and the precinct



### 7.7 A question of identity

As mentioned above, a good community building provides identity drawn from the environment around it. The precedent studies revealed that public acceptance of a project is more readily given if there is a connection with the past, an element of palimpsest. Thus, whether good or bad, memories promote acceptance. Older generations will be able to remember a time when they either worked in the city centre or came to it for recreational purposes. Younger generations will be educated about a world that never belonged to them, with past successes and errors out in the open. These all serve as a link to community identity and that of the region. Thus the decision is made to use the identity inherent to the city centre of Pretoria to give identity to the project.

### 7.8 Pretoria and the Modern

As a prophet is seldom honoured in his home country, so the modern movement found most of its support outside the European countries that defined its origin (Gerneke, 1998:198). In South Africa, the movement was embraced and infused into the local architecture. Most of the tenets of the Pretoria regionalism style originated in the Modern Movement. The architecture of the 30's and 40's in Pretoria resemble the Modern Movement, yet are tempered by local circumstances. Protagonists of the style include McIntosh and Eaton, members of the Transvaal group of architects. Elements that characterize Pretoria regionalism include traditional plan forms, low-pitched iron roofs, sun-shy windows, deep eaves and verandas, and above all sensitivity to the site and climatic conditions (Fisher, 1998:125). Regarding material use, importance was placed on the use of local materials, being mostly brick and influences of Germany and the Netherlands, most significantly the work of Le Corbusier, resulting in the use of new materials such as steel, glass and concrete (Fisher, 1998:130).



Fig. 7.18 Transvaal Provincial Administration Building , Pretoria, 1962, Brise Soleil present on facade



Fig. 7.19 Pretoria brick vernacular



Fig. 7.20 College of Nursing, Pretoria, 1965 - Freestanding auditorium

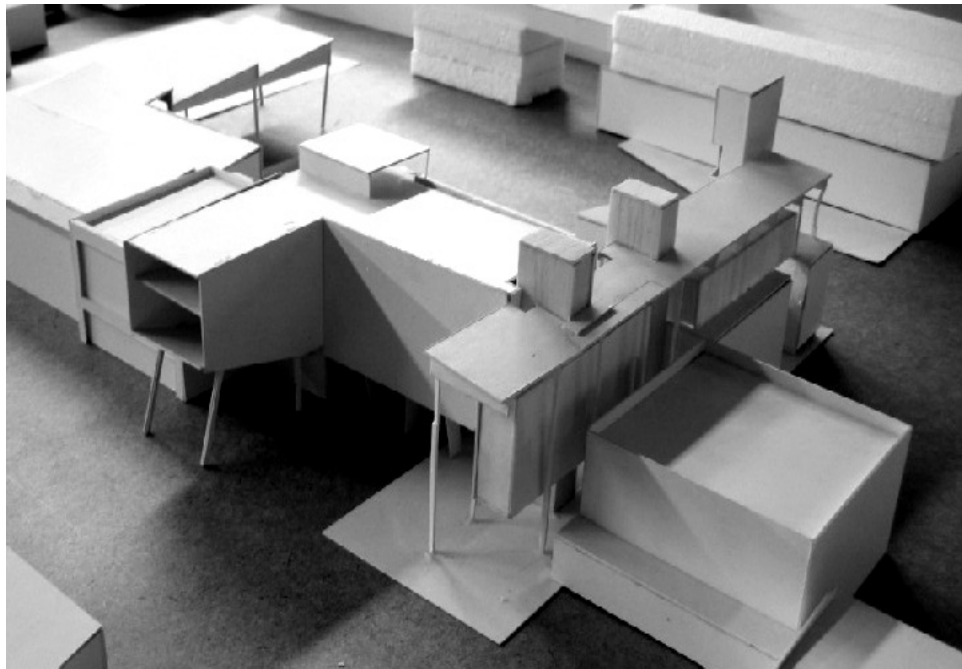


Fig. 7.21 High Performance Centre, Pretoria, 2005, the modern in a contemporary manner

It was the availability of these materials and their applications, combined with the local availability of cement during the early 1900's in Pretoria, which most challenged and shaped Pretoria Regionalism. The flat concrete roofs so popular in the modern movement were used in conjunction with a more cost effective local approach; flat tin roofs (Fisher, 1998:131).

The Afrikaner settlers who founded the city of Pretoria, had always felt special connections to the land they inhabited, due to their agricultural history. Fisher (1998:137); describes them of having a strong sense of dwelling and direct ties to the land, as defined by Heidegger's concept of "wohnen". Climatic conditions dictated the need for deep overhangs and the stoep became an element that came to epitomize Pretoria regional architecture, combined with climate control in the form of Le Corbusier's brise soleil (Fisher, 1998:136). It is worth elaborating that the wide scale uses of Brise soleil (sun controlling shutters used in conjunction with bold reinforced concrete) occurred in Brazil, and the subsequent use by Modern architects extended to Pretoria (Gerneke, 1998:210).

Oscar Niemeyer, the Brazilian architect had a wide-spread influence. This influence is reflected in the first building in South Africa, which is the Ministry of Transport building in Pretoria, designed by Norman Eaton. The facades with fins on a grid, adjustable Brise Soleil, sculptured lift towers and flexible office space are all typical of this school of thought (Gerneke, 1998:213). Further qualities of the Brazilian movement include roof garden spaces with flowing forms and exterior spaces that compliment the building. The separately articulated auditorium, a regular feature of Pretoria institutional buildings, was first used in the Meat Board building in 1950 (Gerneke,1998: 216).



### 7.9 Integrating the modern

The intention is not to design a modernist building, but rather to introduce elements characteristic of the Pretoria vernacular into the building. The sensitivity to the site has been illustrated in the context analysis and urban design proposal. The use of a plinth, mid-section and floating roof are common throughout Pretoria and are apparent in the education wing of the building. The flat concrete roofs, so popular in the modern movement, are combined with the locally preferred flat steel sheet roof.

Regarding material use, material use is mostly limited to products locally available, such as brick, steel, glass and concrete. A focus was placed on the use of pure geometric shapes and there is an extensive use of floor-to-ceiling glass, to ensure visibility between the building and the site. Shading in the spirit of Brise Soleil is applied on eastern facades and the roof garden space is dominated with flowing forms.

Finally, the separately articulated auditorium is used to give the building a strong identity in the urban context. The auditorium functions as an additional light box by having a glazed facade looking onto Struben Street, adequately protected from sunlight yet revealing the presence of activities in the building.

Fig.7.22 Exploring the building masses and geometry.

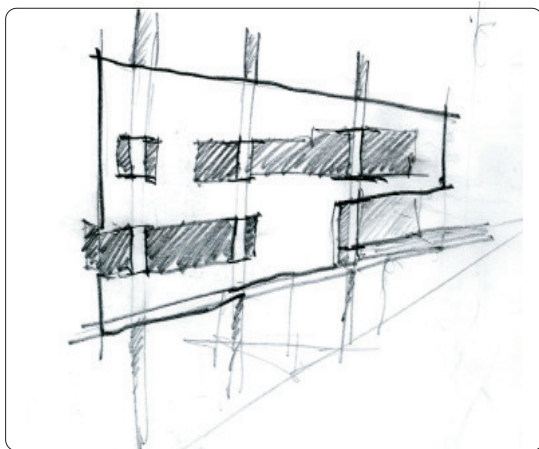


Fig. 7.23 Drawing showing the response to round columns in the building. The building reflects the use of a plinth, mid-section and a floating roof.

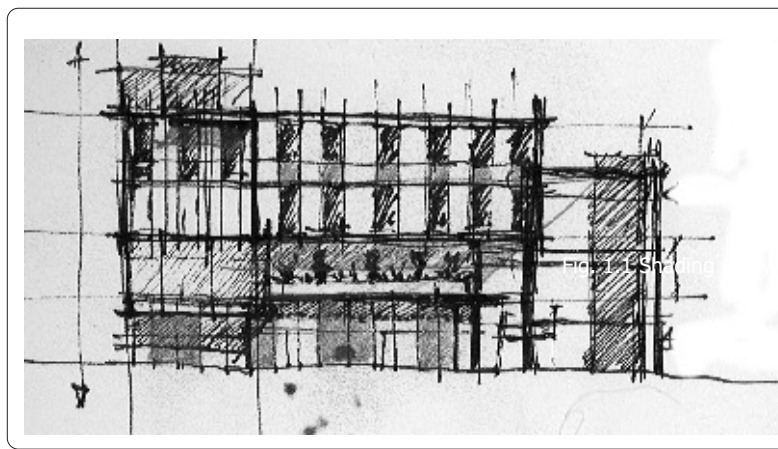


Fig. 7.24 Study of street elevation with floor-to-ceiling glazing

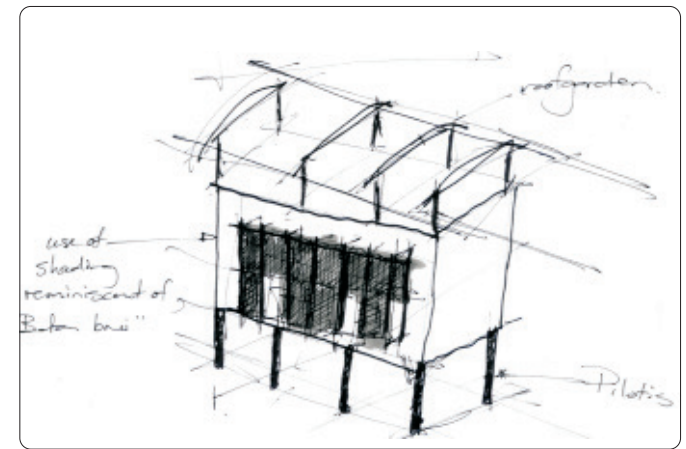


Fig. 7.25 Study of Brise Soleil shading elements

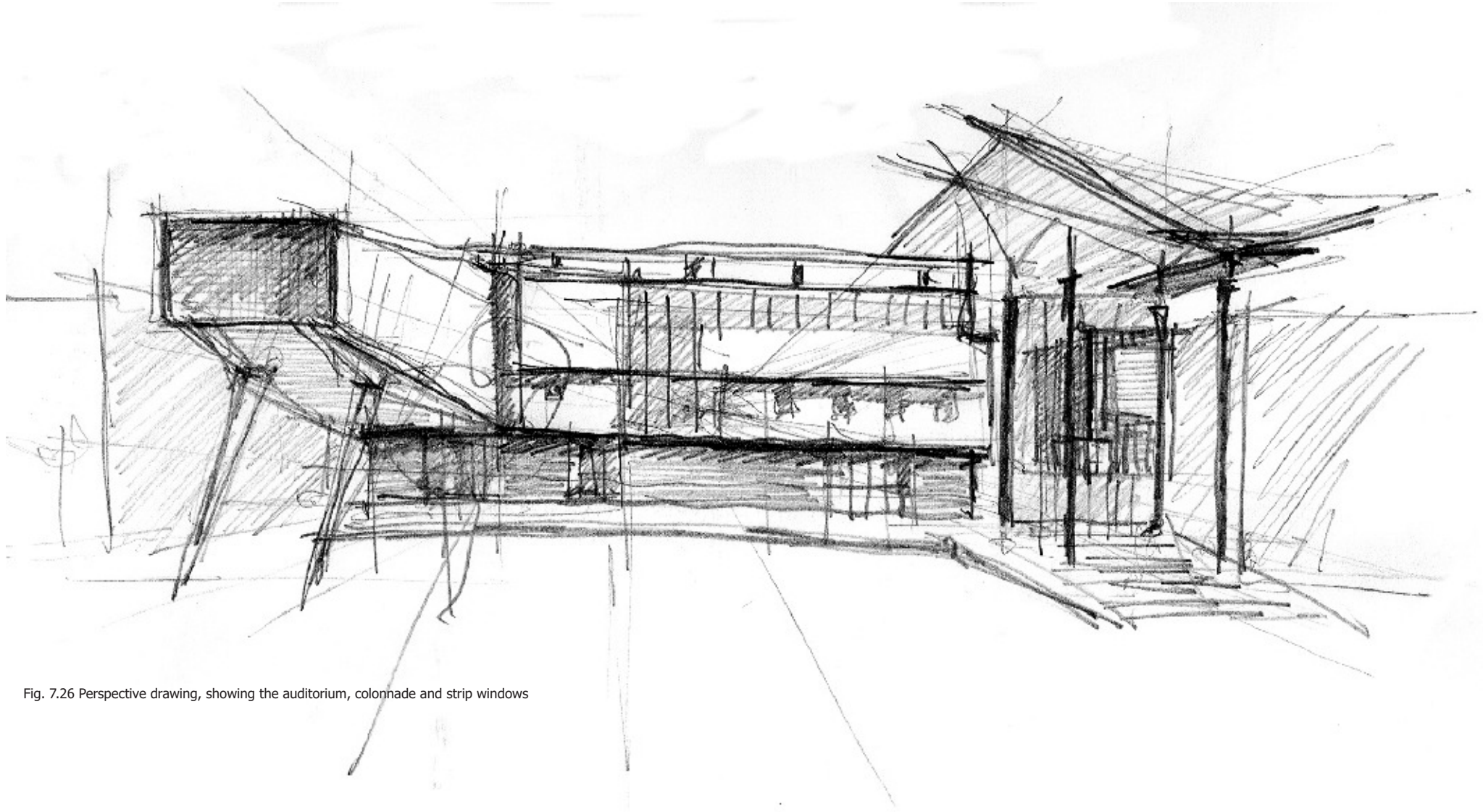


Fig. 7.26 Perspective drawing, showing the auditorium, colonnade and strip windows



Fig. 7.27 Frankfurt Museum, Richard Meyer, 1985. Follies in the landscape, reflecting the building in their appearance.

### 7.10 Adding a new layer

With the historic meaning now attached to the building, the regeneration of the city block as a whole presents the opportunity of introducing a new element into the design that informs the urban intervention. While this addition will correspond to the architectural identity that has been established, it is to present a unifying element in the block as a whole, an element that can serve as a beacon to indicate to the pedestrian that he has entered a public precinct.

The new element finds its origin in the need for safety in the city. Instead of fencing the public space off, to try and ensure safety, small surveillance towers are introduced into the design. These towers will further strengthen the identity of the block, an idea used by Richard Meyer in his design for a museum in Frankfurt (Murray, 1985:23). Meyer installs 4 different follies into the landscape around the building, reflecting the material and form found in the building itself.

The program of these light towers must include some form of surveillance, ideally 24 hours if possible ( e.g. a study centre for the students or police crime prevention unit). They will be placed at all entrances to the city block, and an additional central one next to the main building in the centre of the public precinct.

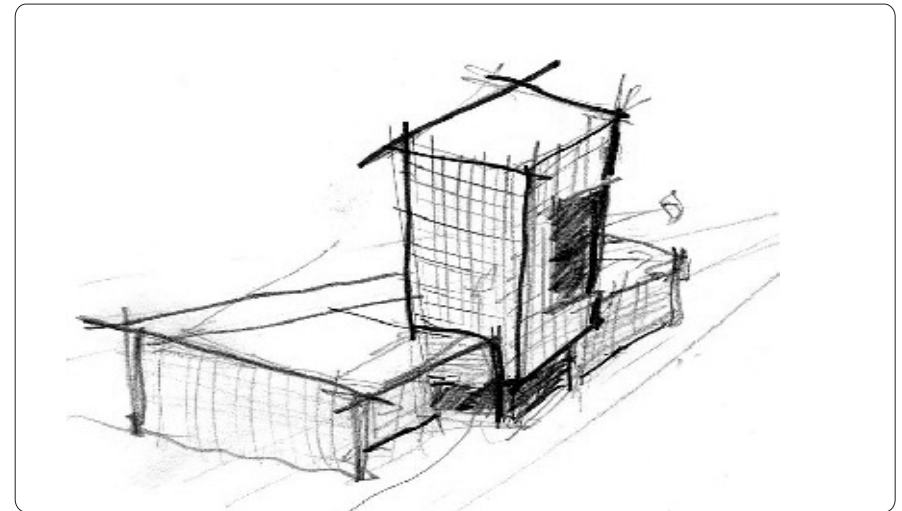


Fig. 7.28 Appearance of the towers

### 7.11 Symbolism

The towers' appearance is associated with light, symbolic of guiding people. This is a common element in most cultures, the concept of wanting to move towards a light source. To emulate this appearance of a light box the boxes are concrete structures, clad with punctured Kor-ten plates. At night light emanating from the structures will give the appearance of lanterns throughout the city block.

The material is also employed in the main building, where an exposed steel frame is used wherever the Kor-ten cladding comes into play, producing a more lightweight appearance to a building that has a predominantly bulk mass. The cladding is an indicator of passive surveillance throughout the design.

Further, the light boxes placed throughout the design are an opportunity to reflect the industrial shed-like existing appearance of the site, by using the metal sheeting from the demolished buildings as shuttering for the concrete facades. The result will be the concrete frame visible in places behind the Kor-ten plates, resulting in a dual layer of time and significance. In time the Kor-ten will weather and create a symbolic merging between what was and what is.



Fig. 7.29 Location of the towers

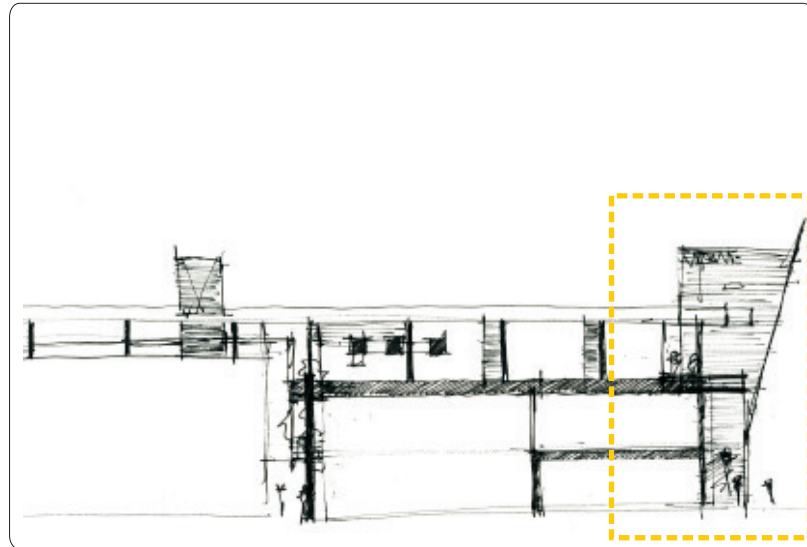


Fig. 30 West elevation study, showing the relation of the tower to the building

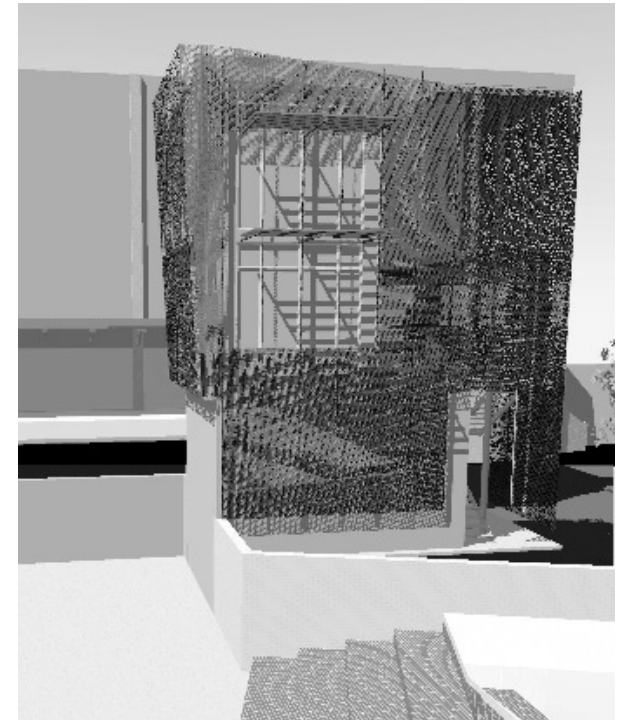


Fig. 7.31 The materials of the light box

### 7.12 Including the layer in the intervention

In addition to the lightboxes, a horizontal light box is introduced into the foyer of the main building, pertruding into the street space. The idea of this box is to create a safer environment in the street, while thrusting the presence of the intervention into the existing fabric of the city centre. The program will be a shop due to the effective advertising space, ideally a sports shop to reinforce the program introduced into the area.

The structure of the horizontal light box is important as it needs to be suspended between the concrete columns that carry the roof, creating the appearance of the box floating in the glass façade that is the main entrance of the building. The structural system is primarily a ring system of steel I beams, connected to one another with verticle I sections, providing the necessary stability. channel sections are fixed to the I-beams onto which the composite panels are fixed.

The box cantilevers quite significantly towards the northern side, thus cross bracing is used between the I – sections. Although the current program of the box does not require soundproofing, it is never the less employed to retain the argument of the building having a longevity factor inherent in its structure. Thus sound absorption materials are fitted into composite walls.

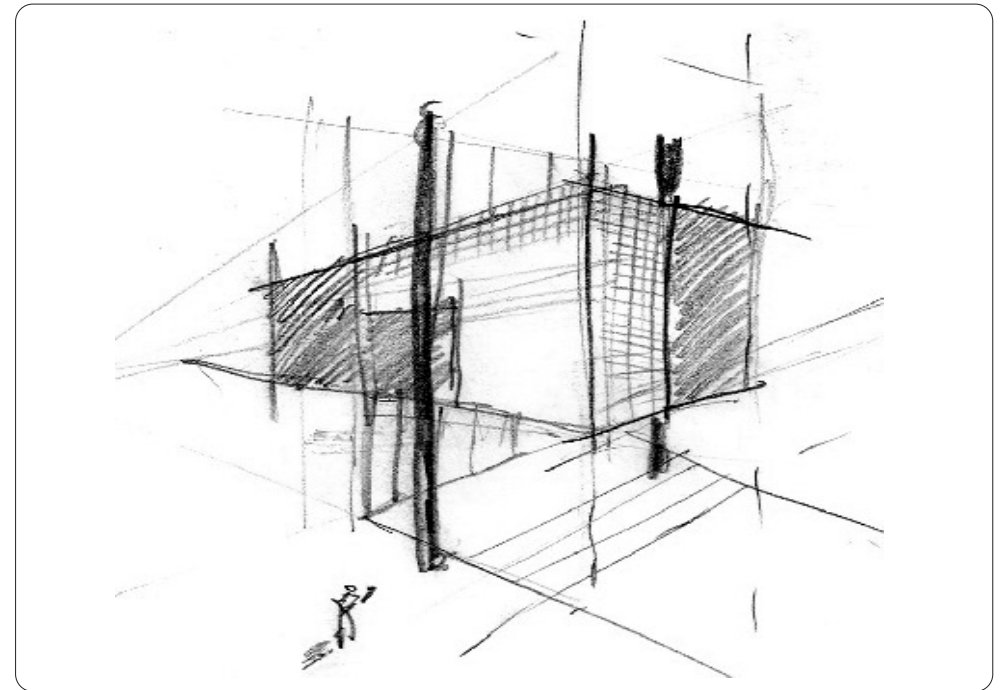


Fig. 7.35 Concept of the horizontal box

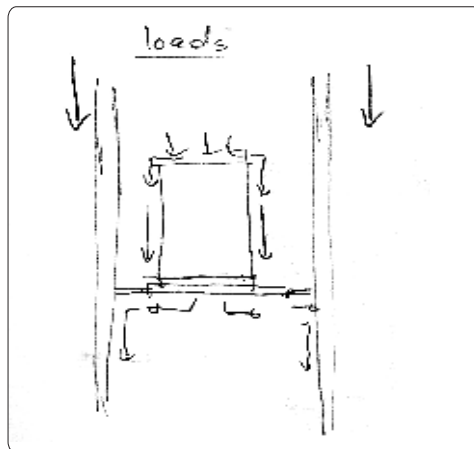


Fig. 7.32 Study of the flow of forces through the structure

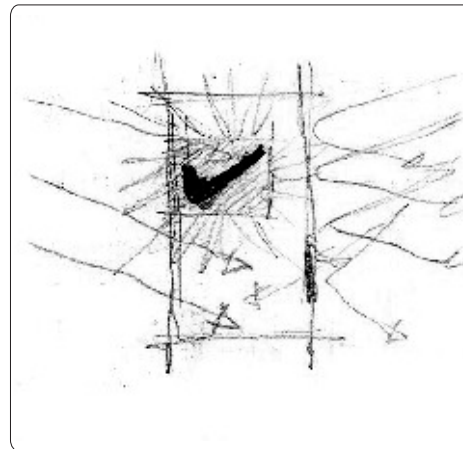


Fig. 7.33 Exploring sun angles and the box as advertisement

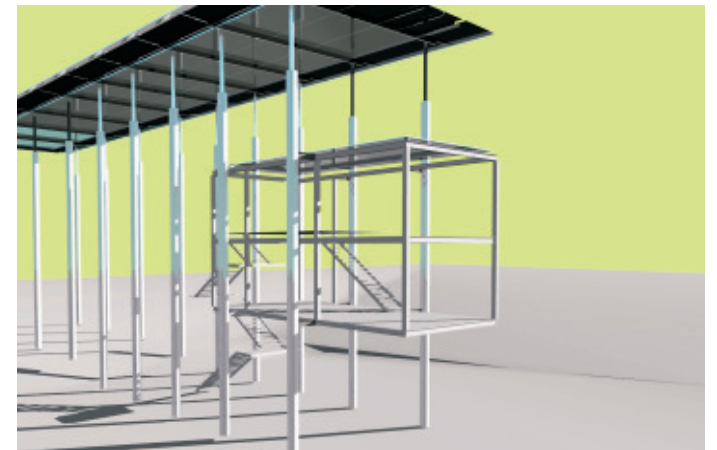


Fig. 7.34 Structural system of the box



Fig. 7.36 Three dimensional representation of the box

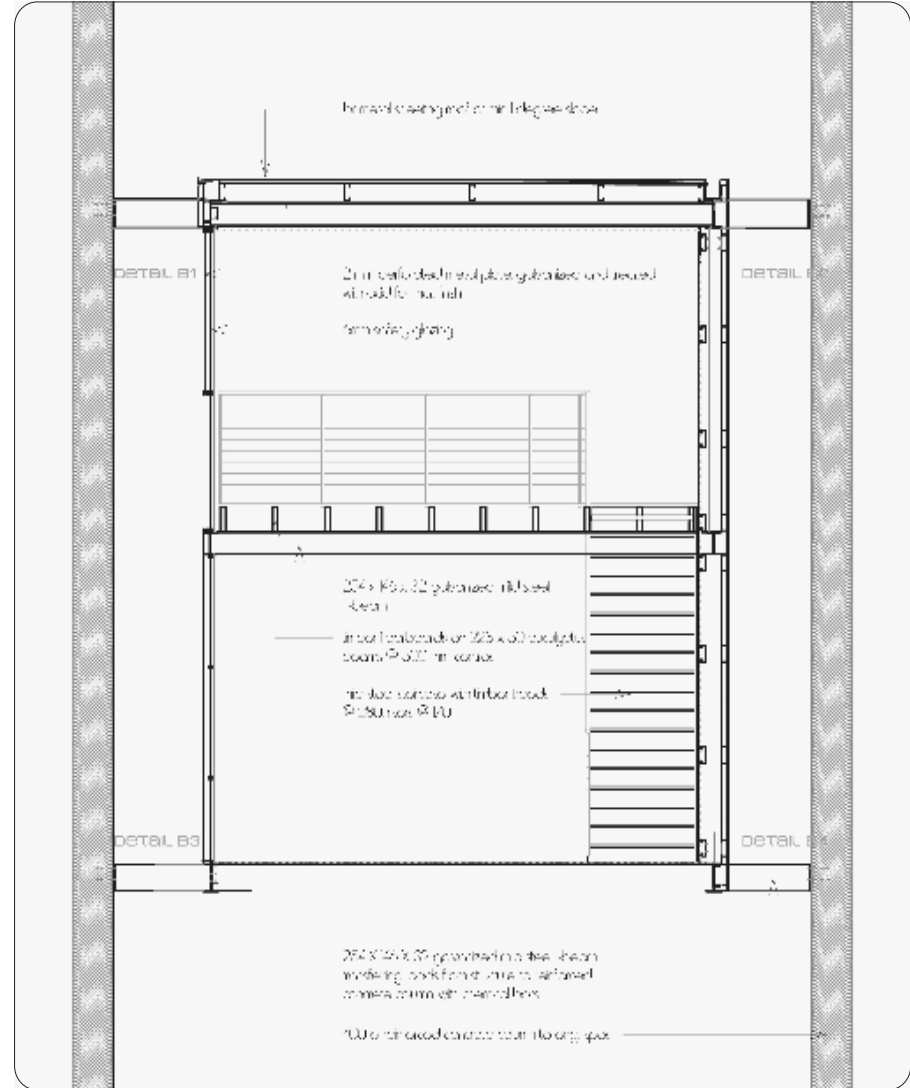


Fig. 7.37 Section through the box

### 7.13 Programme

This vision for the building entails that in its essence it will not necessarily fit the mould of any particular building typology, the building will thus accommodate the following programme:

Public restrooms and showers – Public restrooms are a rare luxury in the Pretoria city centre, and the showers would be able to cater for individuals participating in the event space. The restrooms are placed strategically at the junction of the pedestrian walkway and the buildings main axis.

Offices – Flexible office space consisting of partition walling in a single floor, catering for related educational and sports organizations. The ideal behind these offices is to inform individuals of options available to them, regarding financing for studies and sporting opportunities. Agents that are suggested to use these offices as a starting point are the Umsubumvu youth fund, a government funded organization specializing in youth upliftment by providing funding for education and entrepreneurs, the Sports Trust who manage the precinct, and the Ali Bacher Sports Fund. The offices will include some hot office space, allowing entrepreneurs to receive effective support while running their businesses. This will work hand in hand with the incubator stalls that are available in the site. There is a shared meeting room that can be used as necessary, or as a VIP area during important events, as it looks directly onto the sports facilities below.

Bar and club – The nature of such an event space automatically identifies the potential of eating and drinking places.

Retail – In any public precinct there is a need for efficient retail facilities. The retail faces the street, to ensure maximum exposure. The horizontal retail space has already been discussed in detail.

Library– To support the currently active institutions in the area, as well as provide these relevant facilities to the immediate community.

Internet facilities - With a separate instruction rooms to allow for extra-curricular instruction.

Gymnasium - Allowing for exercise, dance, aerobics and other forms of expression, with its own shower and restroom facilities. The gym will be marketed to a wider target market than the immediate community, to ensure the financial viability and is able to function as an individual entity. A gymnasium is a proven popular facility under students and young people. Equipment can be moved up to the second floor with the mechanical lift of the building.

Medical centre – The centre will focus on sports related injuries, it is not a local clinic.

Kitchen and restaurant facilities – Able to cater for the events and day-to-day customers.

Auditorium – Able to be used for conferences, business school facility for Bethesda church, Upliftment programs etc.

Roof garden – Additional viewing space for the events.

Light box – As mentioned above, the central light box will be a 24-hour study centre.

As many of the facilities are used in different time frames, the facilities can be unlocked as they are needed.



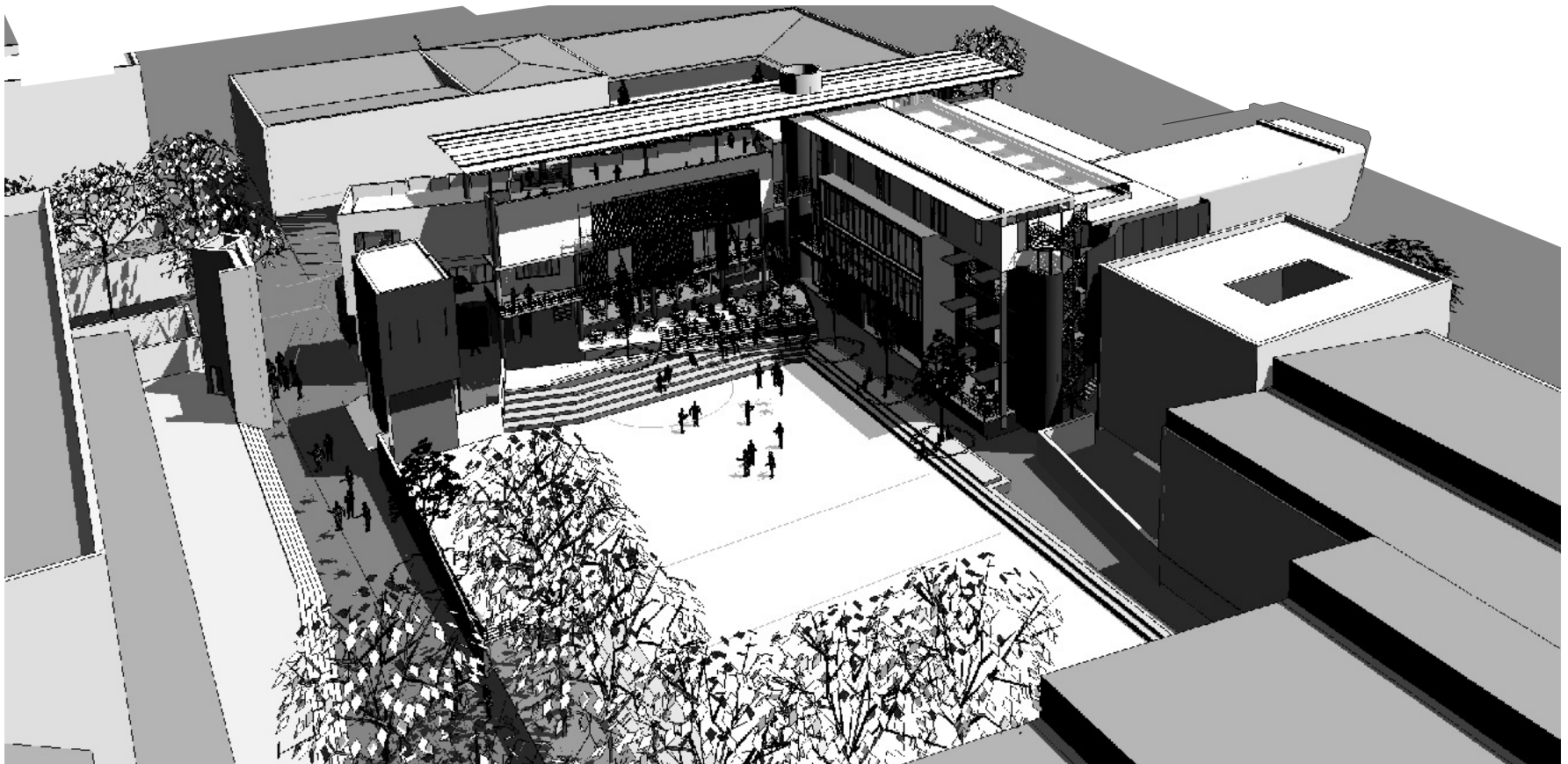


Fig. 7.37 Aerial view, depicting the building around the central public space



Fig. 7.38 The site used at different times of the day





Fig. 7.39 Approaching the building entrance from the north

## Chapter 8 - Technical Investigation

## 8.1 Structure

A concrete structure is selected for economic reasons, as well as being representative of the Pretoria heritage. Concrete columns are used throughout the design, with 85mm  $\varnothing$  rainwater down pipes cast into these columns, leading to underground storage tanks to maintain the public precinct.

Most of the slabs used in the building span 8m, and after discussions with an engineer, it was decided to introduce 340 mm coffer slabs at intervals of 600 mm into the design to ensure proper spans, eliminating deep concrete beams. The rest of the building uses conventional 255 mm slabs.

An exposed steel frame is used wherever Kor-ten cladding comes into play, producing a more lightweight appearance to a building that has a predominantly bulk mass. The cladding is an indicator of passive surveillance throughout the design.

## 8.2 Materials

To a great degree the materials of the building relate to the Pretoria vernacular. This necessitates the use of local materials, while concrete reflects the modernist principles, with a Brazilian influence. The public nature of the building necessitates the use of materials that weather well and are low-maintenance.

### Brick

The use of red brick roots the building firmly in its context, as these bricks are a regular occurrence in Pretoria, especially in institutional facilities. Although face bricks come at a higher price than stock bricks the client will save in the long term with the low maintenance aspects of face brick. As a result walls on ground floor are in face brick.

### Glazing

The concept of the building as a viewing station provided the opportunity of using ceiling-to floor glazing, to optimize interaction between the in- and outside of the building. This ideal, combined with the modernist rational of strip windows results in the extensive use of glass in the building. As a public building, the intervention is to appear open, transparent and inviting, thus the entrance of the building is portrayed as a glass box.

## Timber

Balau timber is used for the dance floors and other mezzanine floors in the steel frames of the building. Aesthetically, the material adds to the warmth and comfort of the intervention. Use is limited to spaces that can be locked up, due to security reasons. The material is also used in the construction of the horizontal light box, as discussed above in chapter 7.11. Long-term advantages include low maintenance cost and Balau timber weathers to grey and does not need to be treated.

## Steel

Steel is used in most door and window frames in the building. Steel components exposed to the elements are black powder-coated for protection. Where possible, galvanized mild steel is used for ease of maintenance. Perforated Kor-ten plates are used as a cladding material throughout the building.

## Surfaces

Public spaces are defined with pre-cast concrete pavement blocks of exposed aggregate in a medium colour. On the roof garden the blocks are on adjustable spacers to level the roof surface. 10 mm open grooves are cast into the blocks to ensure sufficient drainage. Concrete blocks with a brush finish are used to allow easier movement for wheelchair users (Van den Heever, 71). The grass surfaces are irrigated by the underground water storage.

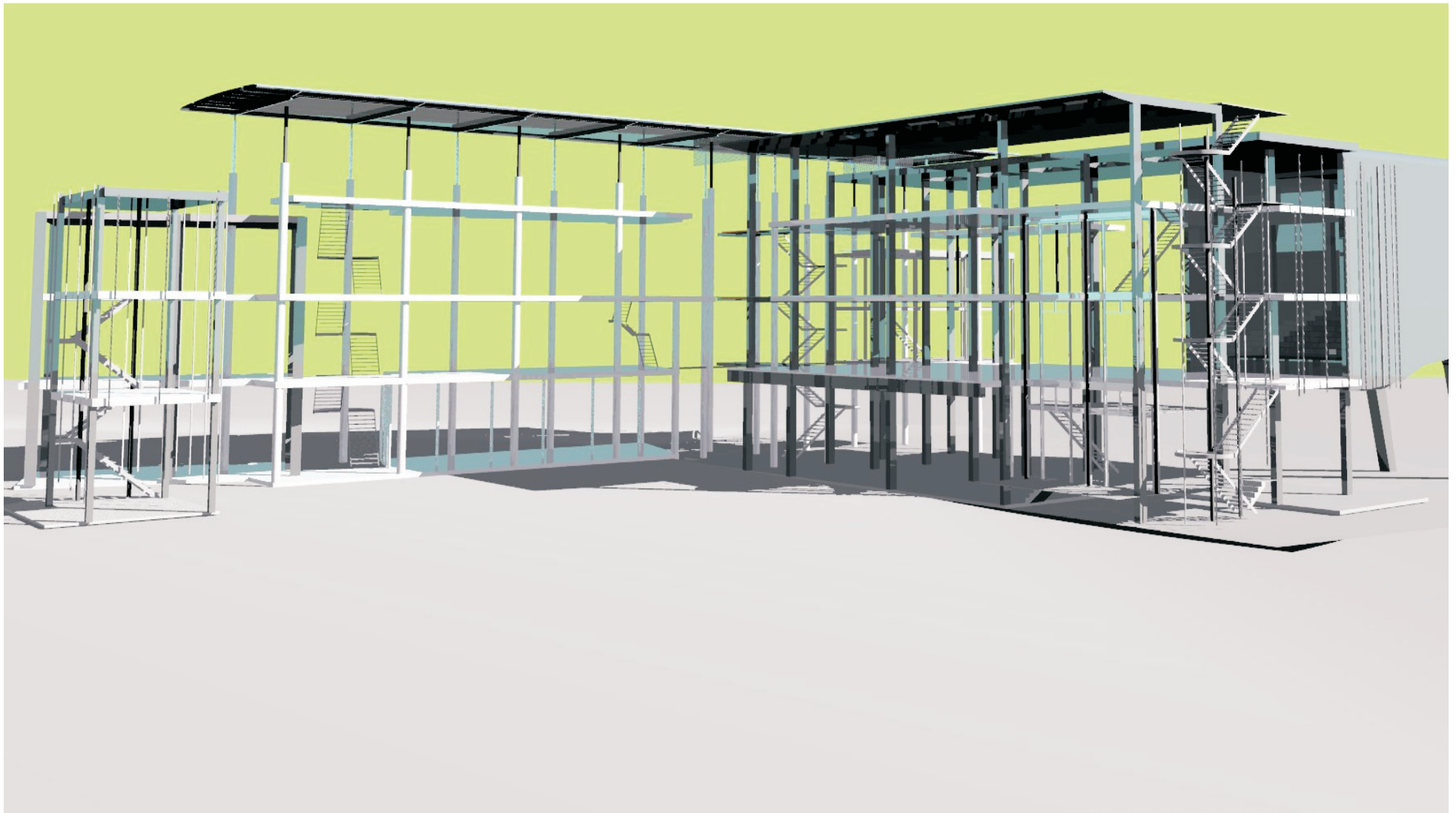


Fig 8.1 Diagram of the structural system of the building

### 8.3 Services

Multiple-service cores are integrated into the design to ensure longevity regarding future air-conditioning and cabling needs. Floors of the buildings are fitted with removable carpet and adjustable spacers to ensure ease of maintenance. Where possible, services are hidden behind a skin of kor-ten plates, providing the opportunity of placing generous openings into public restrooms. A plant room is located on the third floor of the building next to the auditorium to ensure effective air-conditioning. The plant room is accessible by two double doors from the outside, hidden by the Kor-ten skin but provided with a custom hinged door for ease of access.

The kitchen is located on the western side of the building with a service yard. Extraction ducts are fitted into exterior walls for fire regulations. Storm water is collected in channels throughout the site and channelled to the municipal storm water system.

A discussion with engineering experts resulted in the office floor being fitted with air-conditioning units in the removable floor panels. A single unit allows for 100 sq. meter ventilation. The gym is naturally ventilated through the skylight, while all spaces in the educational wing of the building are ventilated via cross-ventilation. The building is designed to allow for future air-conditioning needs if necessary.

### 8.4. Circulation

A disabled-friendly building was one of the main design initiatives. The presence of a lift in the building ensures the accessibility of all parts of the building to disabled users. All restrooms are wheelchair-friendly, including shower facilities. The lift is of adequate size to ensure the moving of gym equipment to the second floor. For ease of security, access to the building is limited to a single circulation space, while necessary fire escapes are provided throughout the building. All routes lead to a fire escape.

### 8.5. Lighting

Movement routes between the light boxes are illuminated by low-level lighting in the shape of bollards. Bollards are 350 mm high to double as seating space. The rugged appearance of these lights ensures easy maintenance and are theft-proof. Bollards that prevent vehicles from entering the public space are custom-made steel plates, removable if vehicles need to enter the spaces.

Spread lighting is placed around the soccer field and public space, yet will only be used during events.

### 8.5. Phases of construction

1. Construction of sports facility to define urban edge and frame public precinct. Add education facility to further define public precinct
2. Convert existing buildings into incubation stalls and community hall, introduce apartments onto incubator facilities and add soccer field.
3. Convert existing building into additional office space.





Fig 8.2 View from Struben street

main circulation

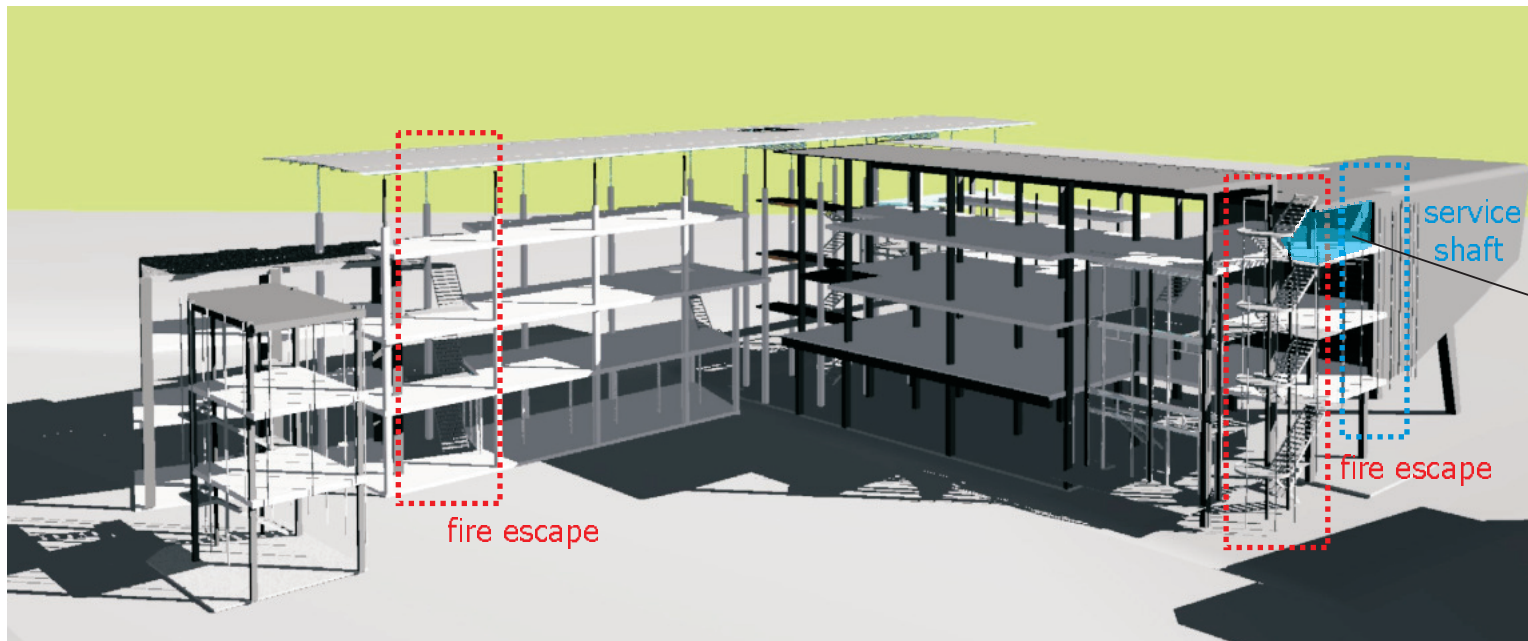
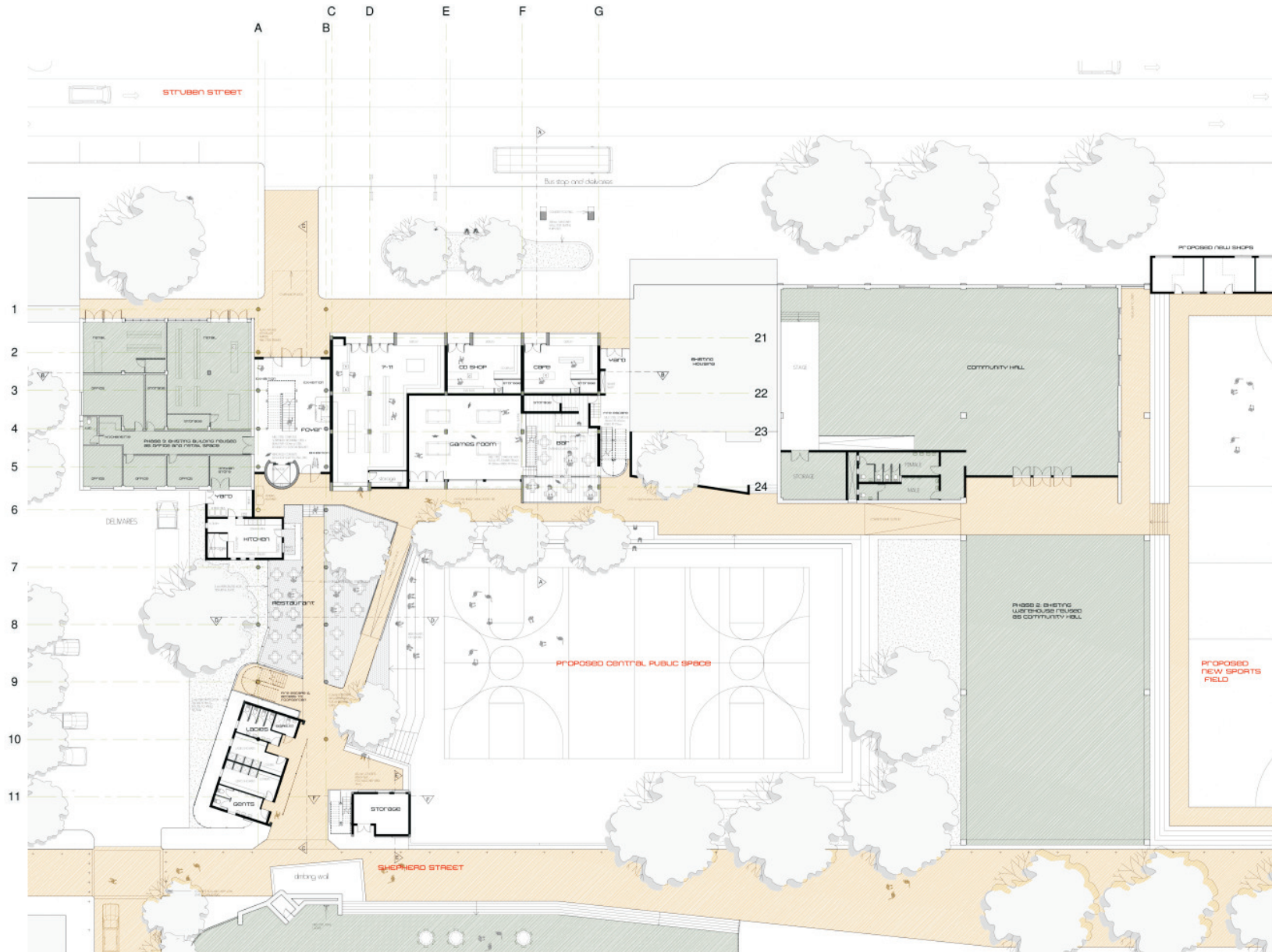
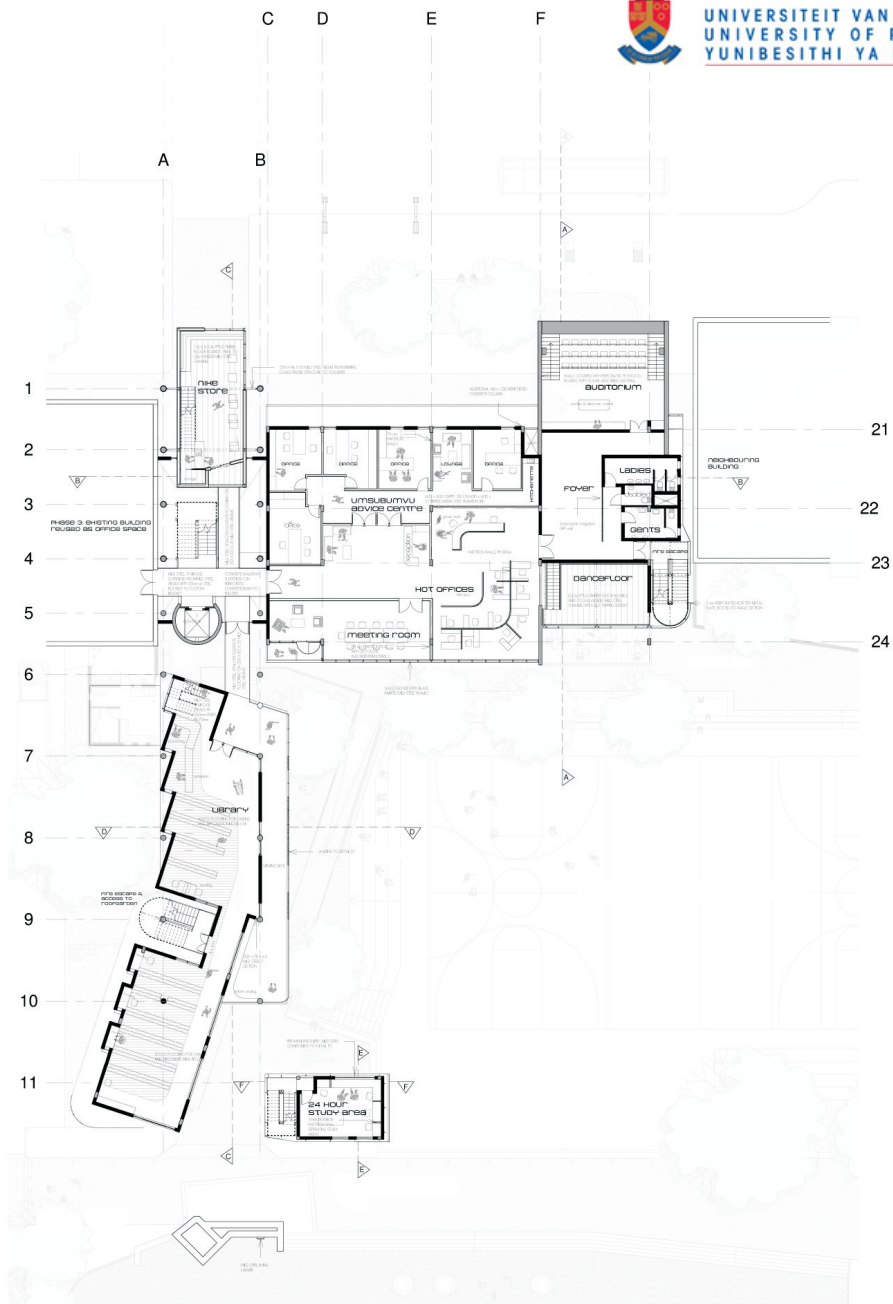


Fig 8.3 View from the public space

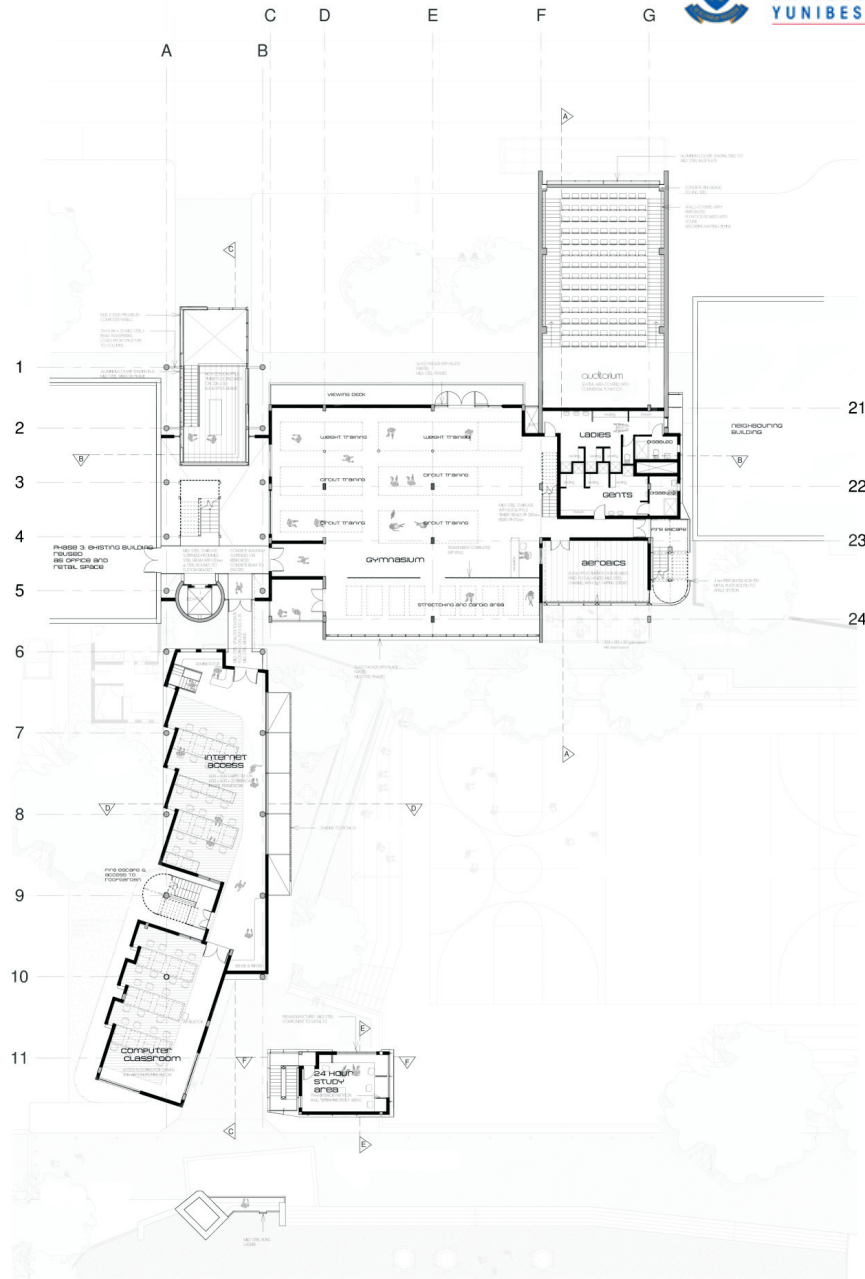
plant room



GROUND FLOOR, NOT TO SCALE

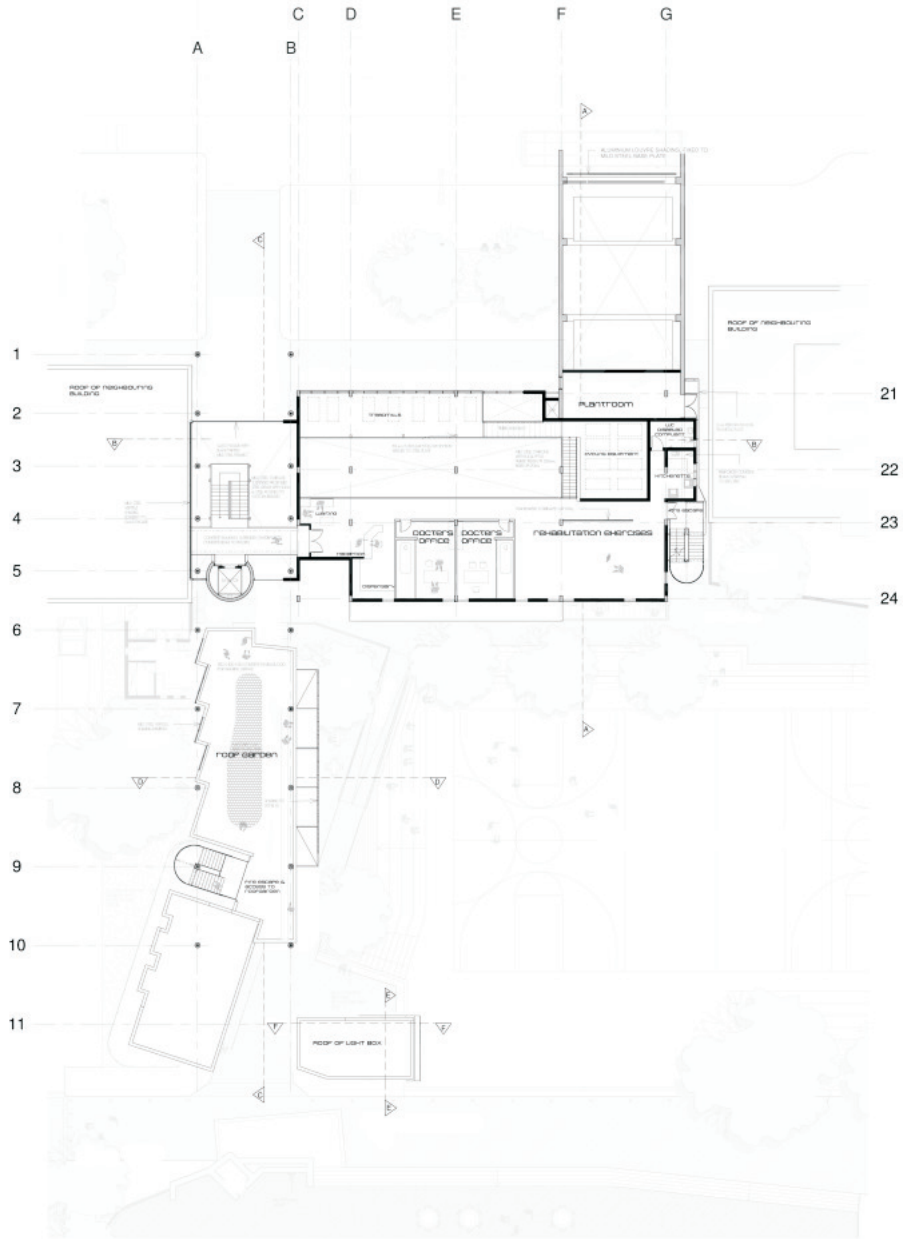


FIRST FLOOR, NOT TO SCALE



PHASE 2 PROPOSED NEW HOUSES

SECOND FLOOR, NOT TO SCALE



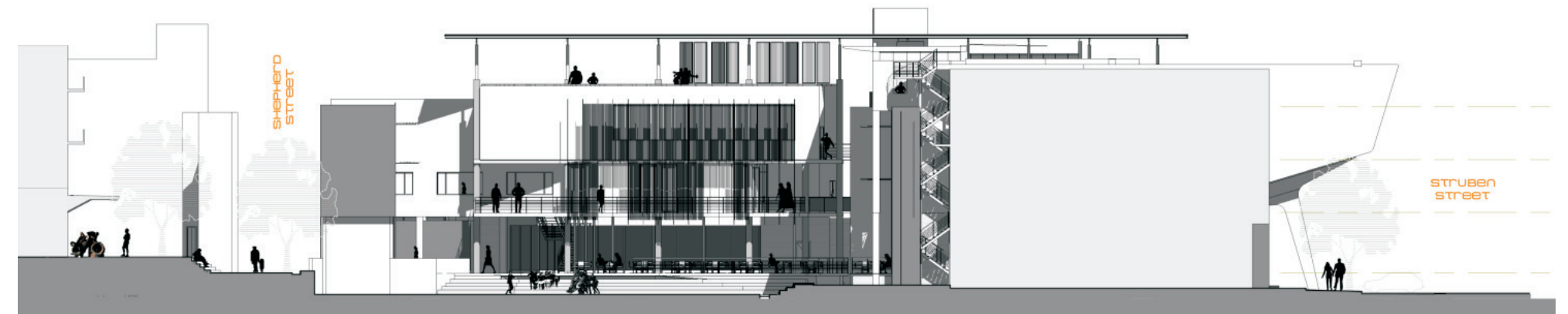
THIRD FLOOR, NOT TO SCALE



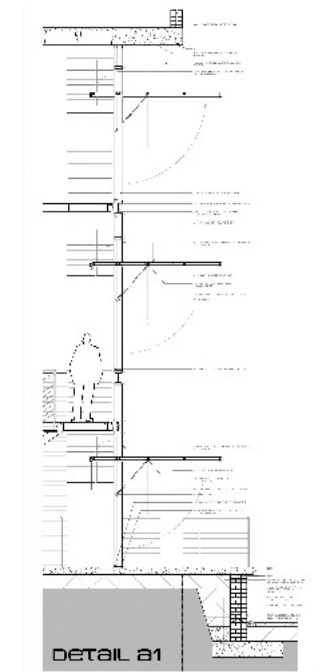
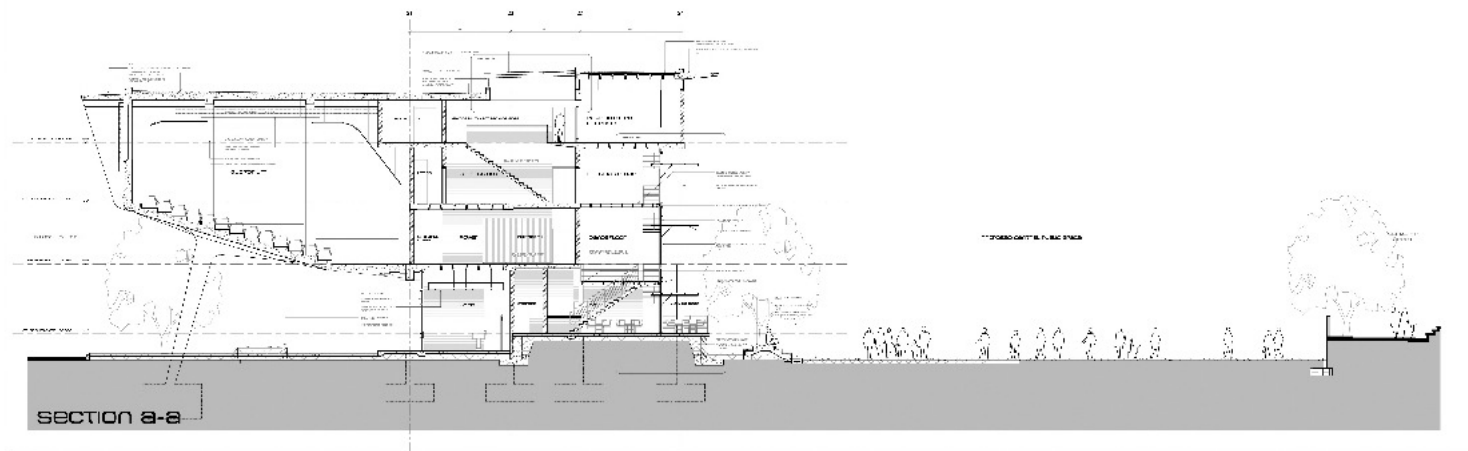
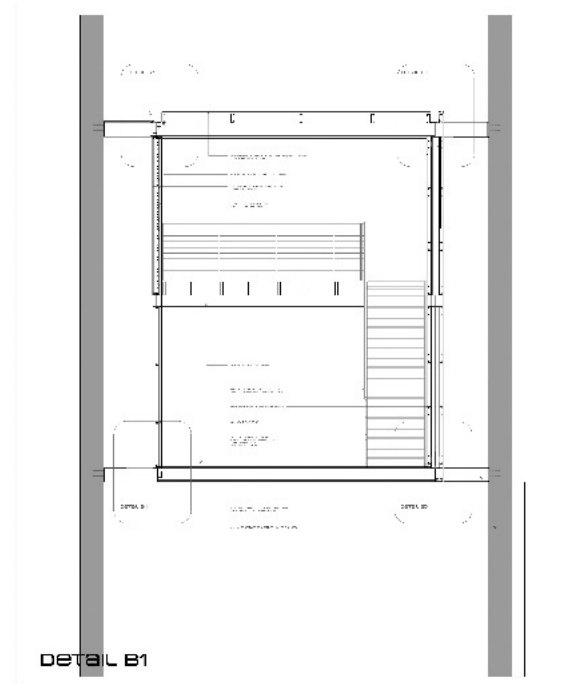
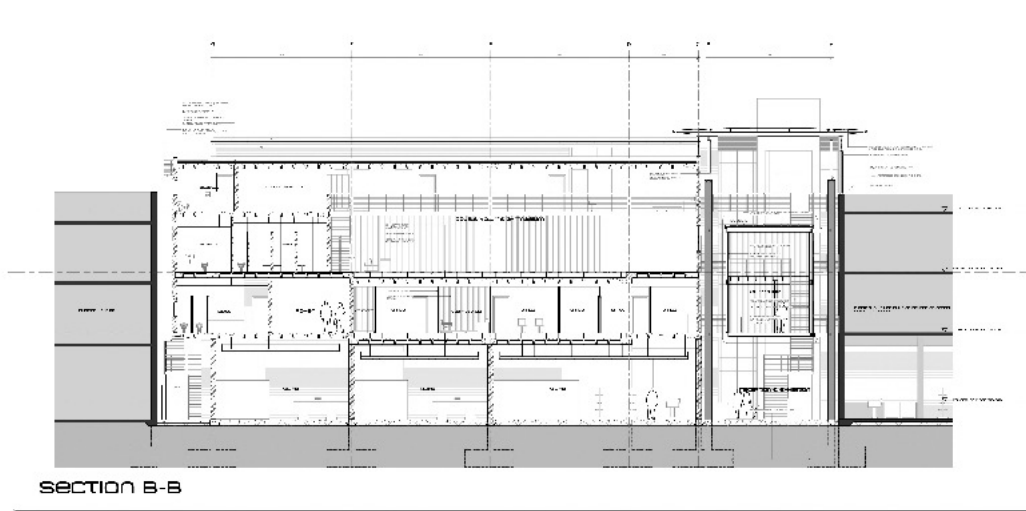
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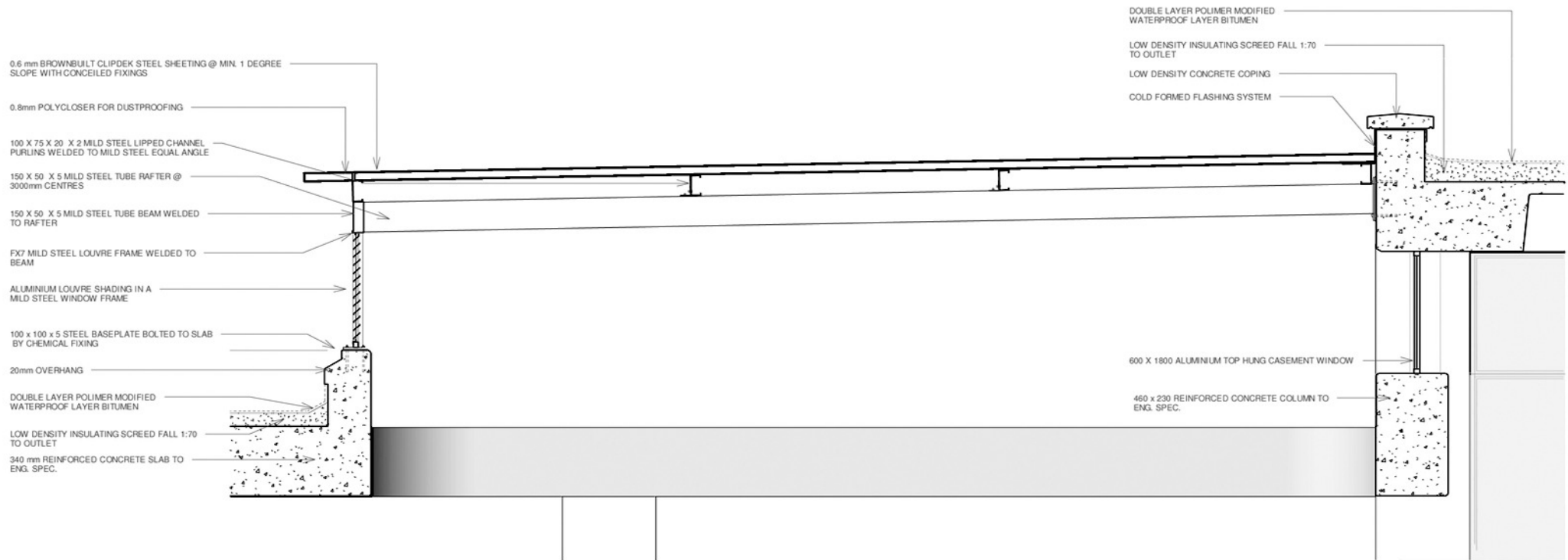


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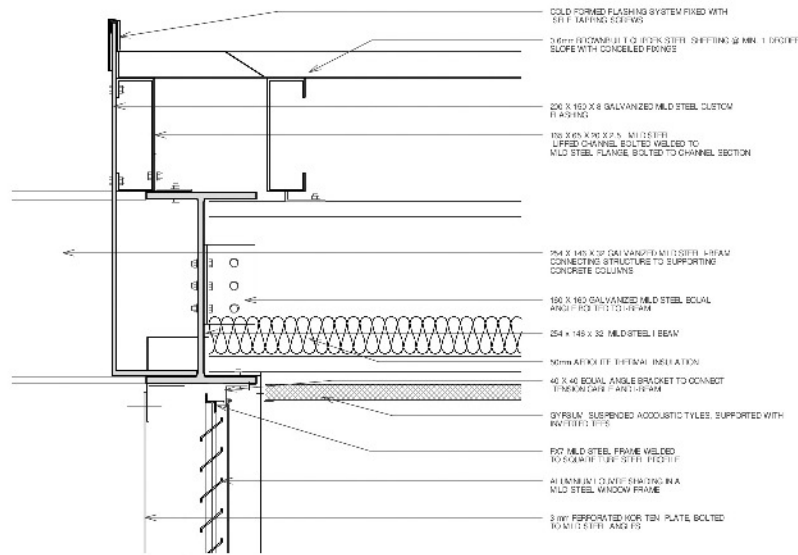
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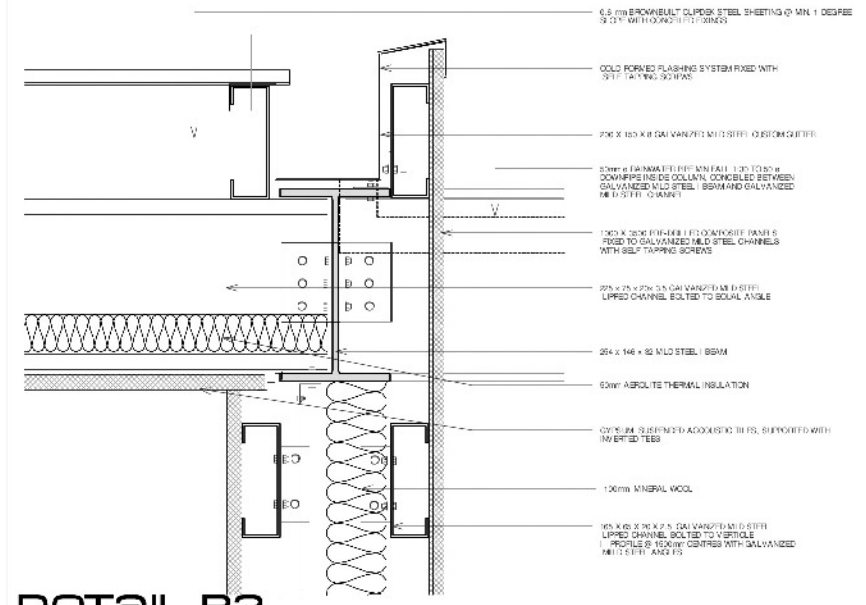


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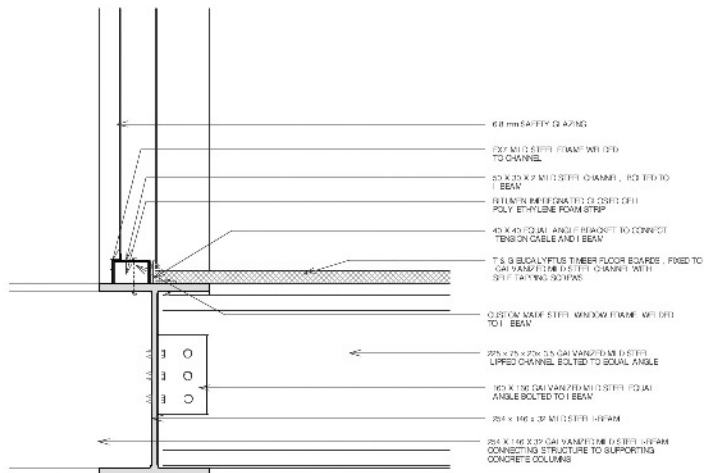




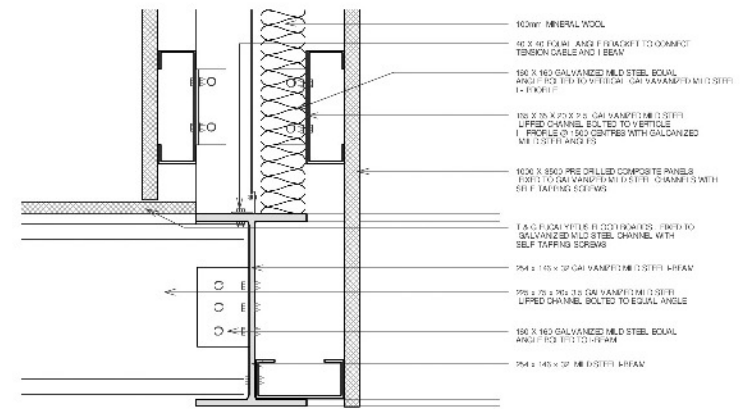
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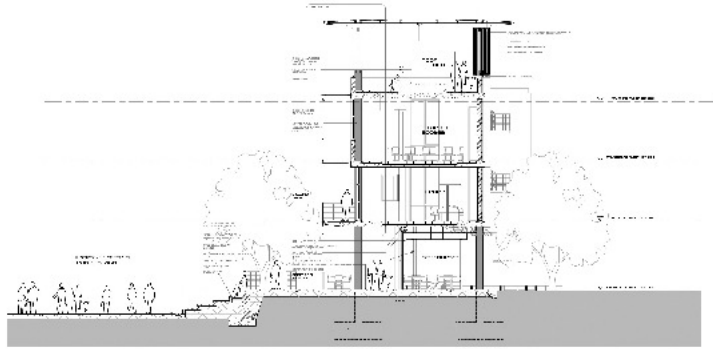
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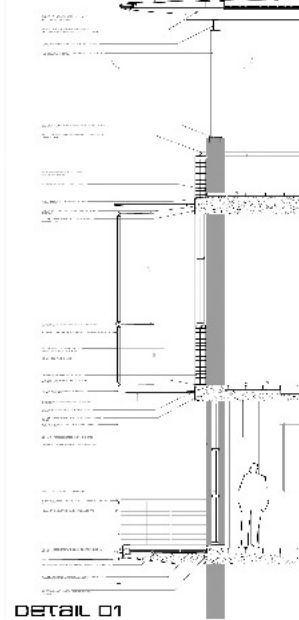
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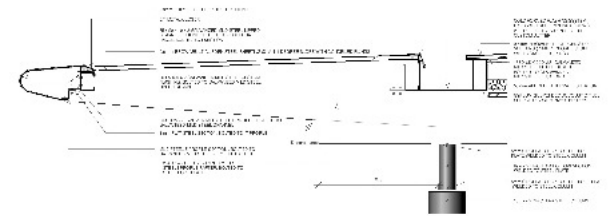
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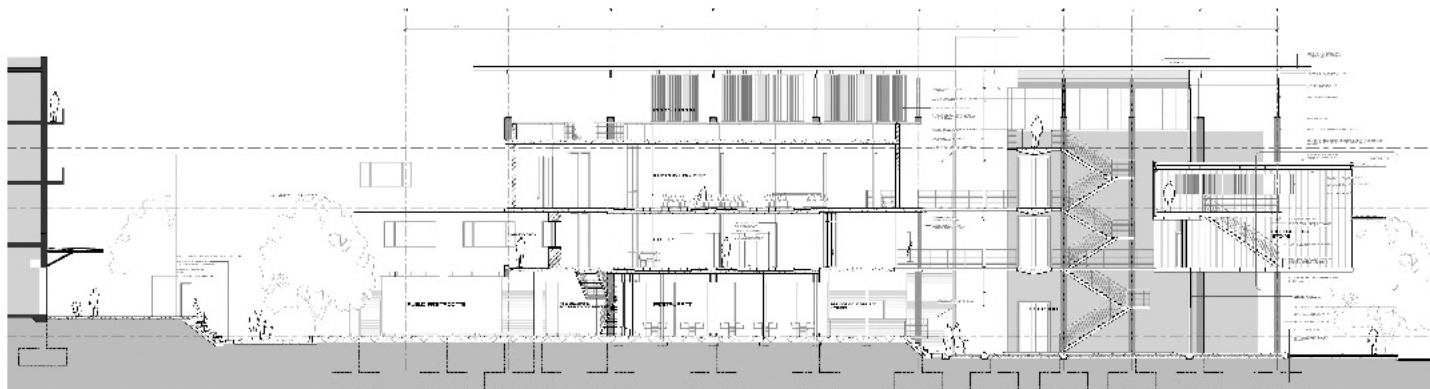
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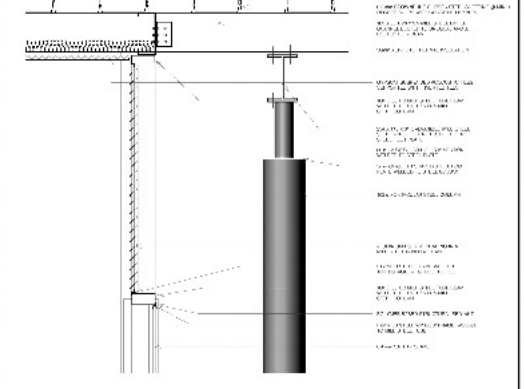
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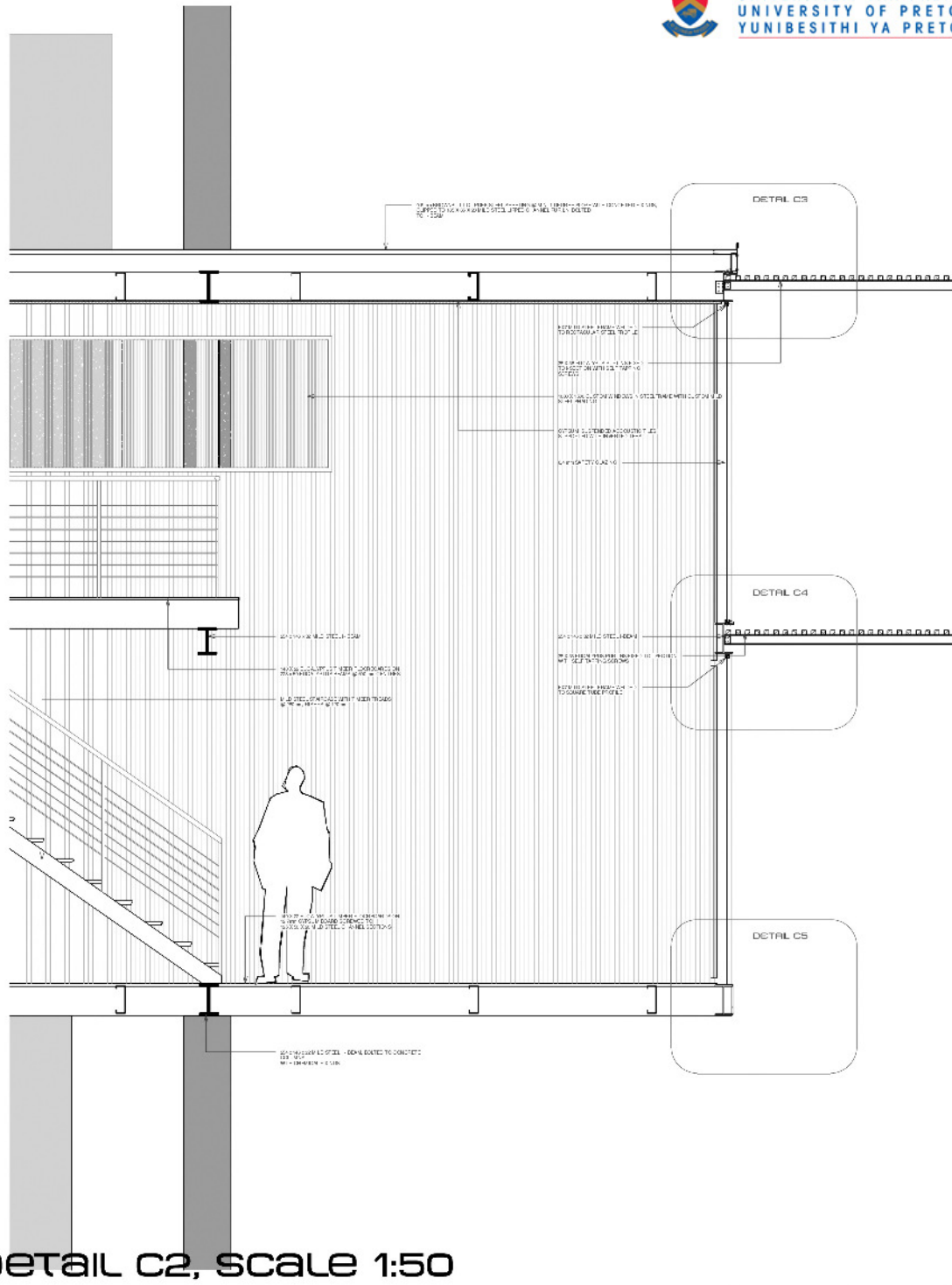
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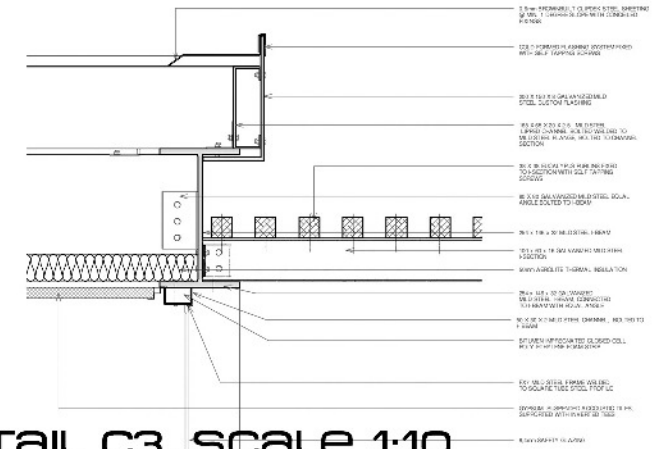
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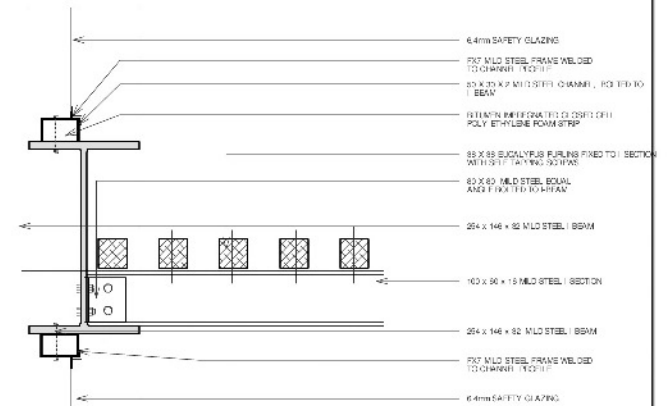
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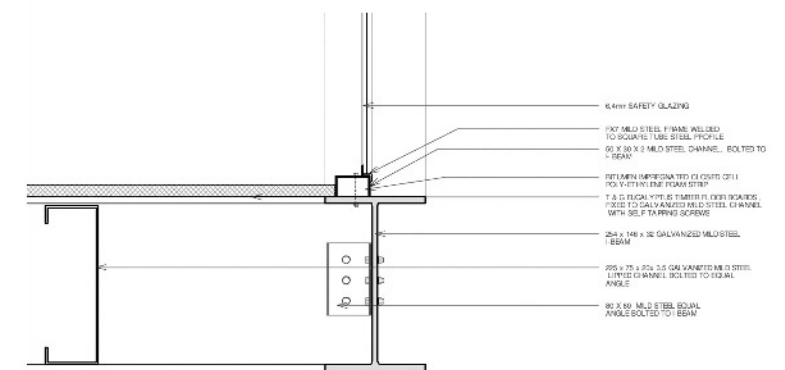
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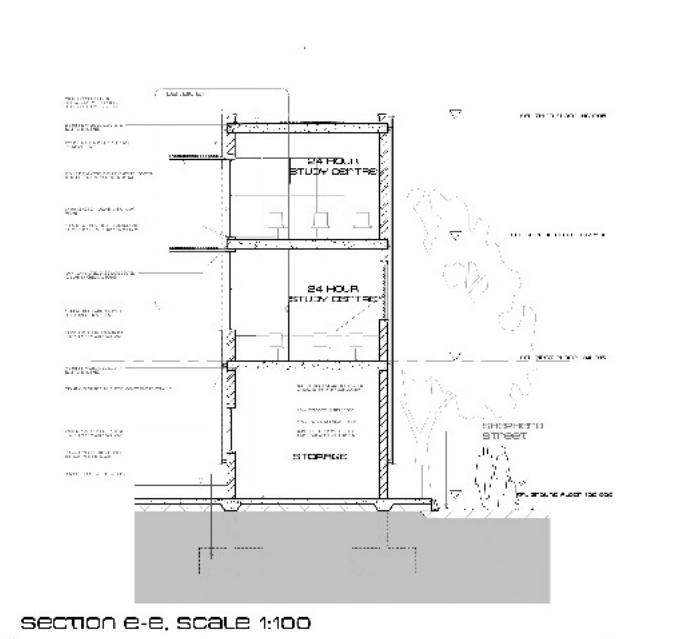
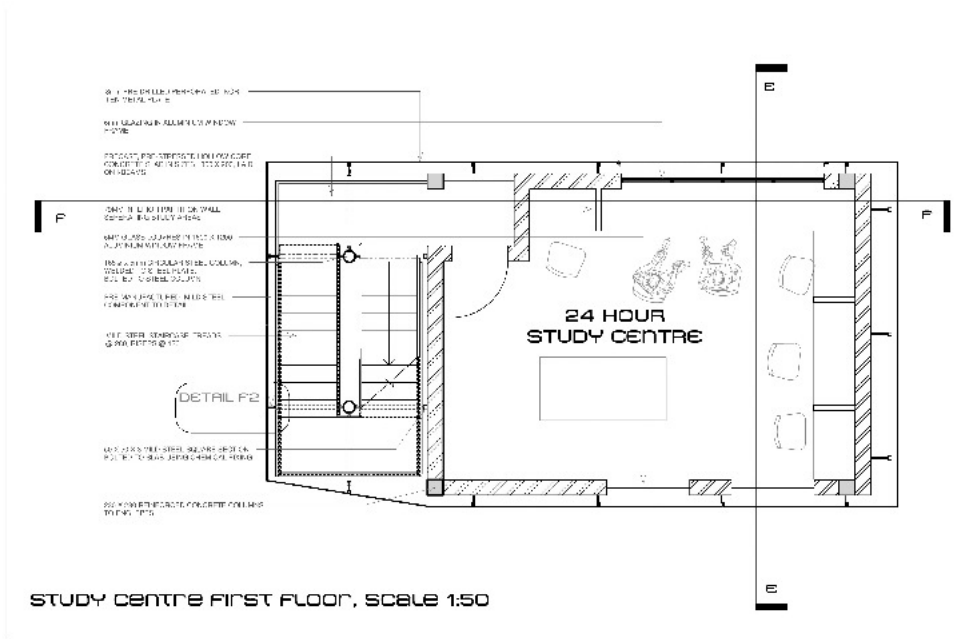
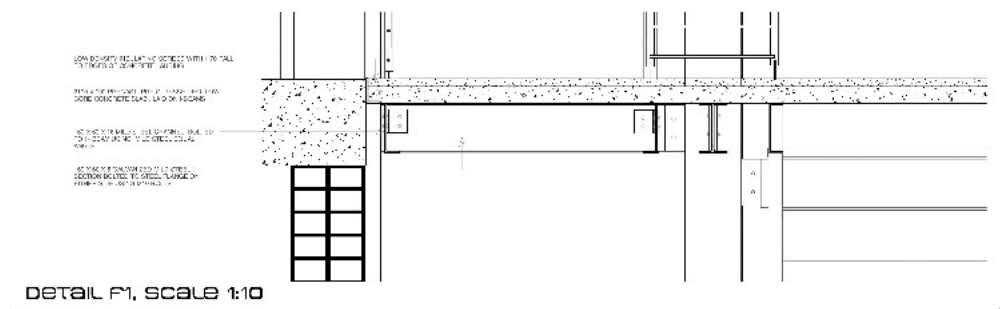
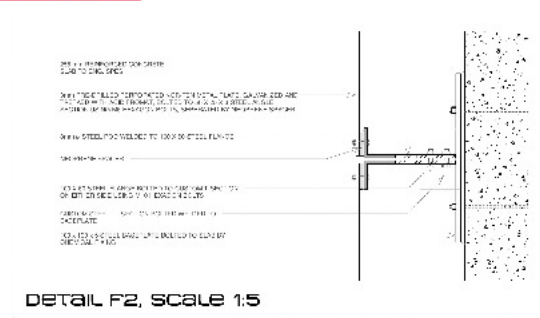
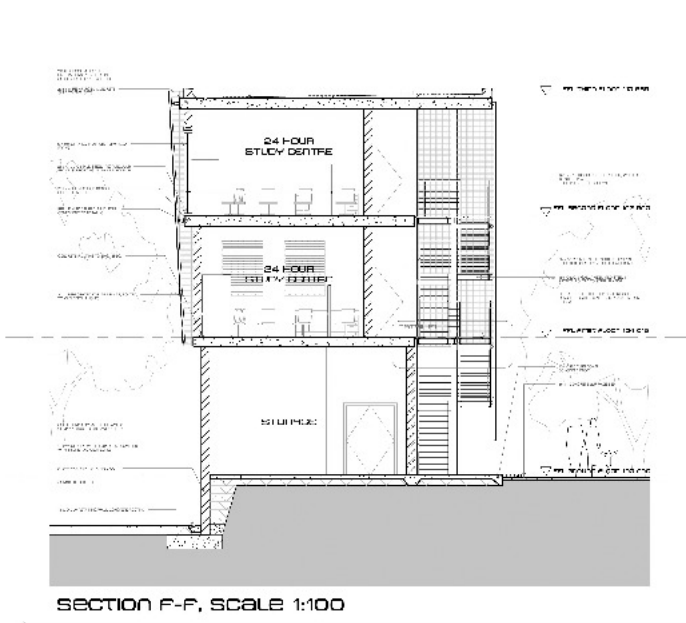


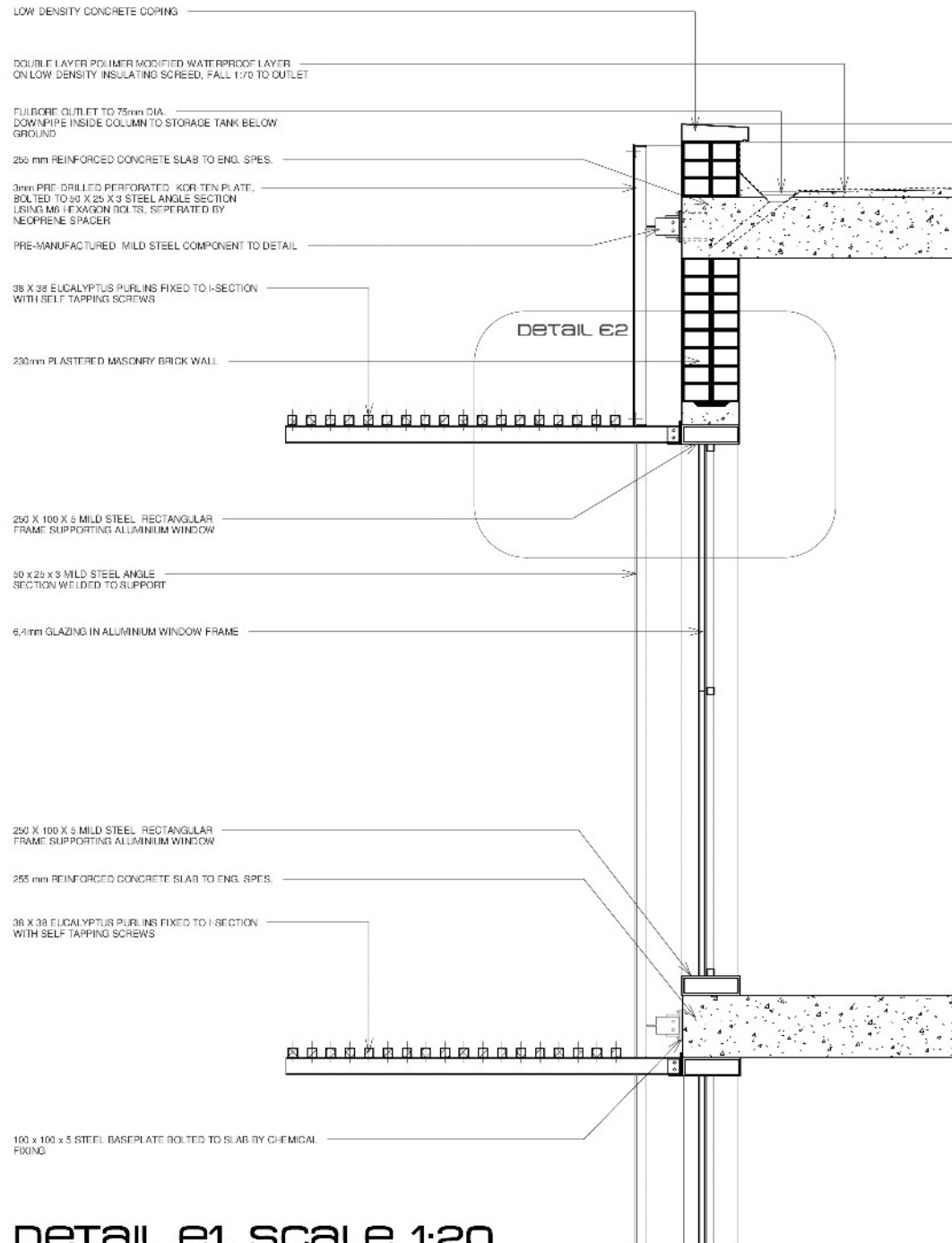
DETAIL C4, SCALE 1:10



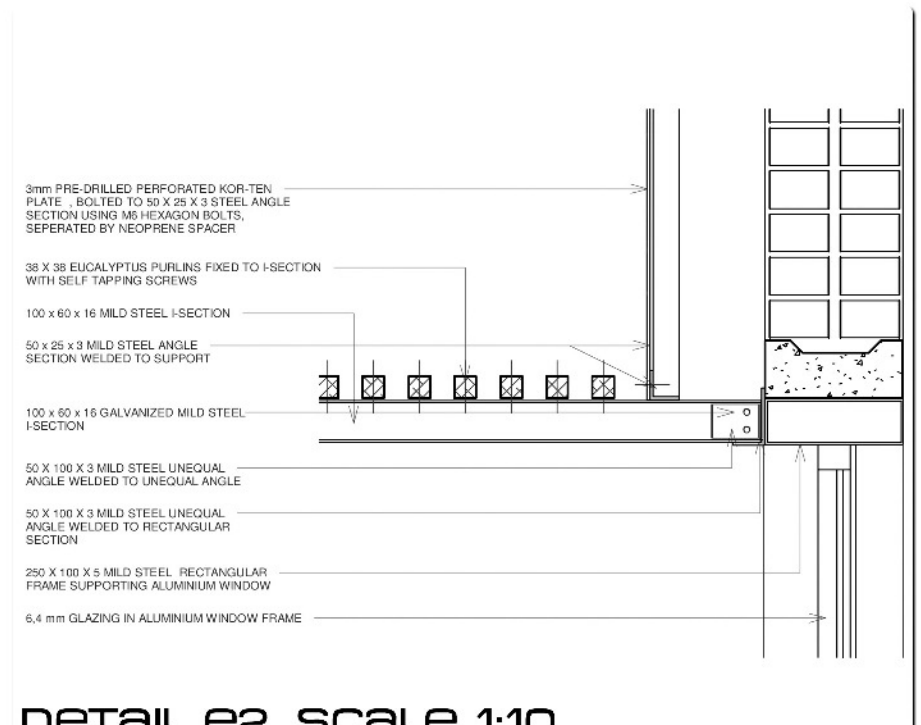
DETAIL C5, SCALE 1:10







DETAIL e1, SCALE 1:20



DETAIL e2, SCALE 1:10

## Chapter 9 - Conclusion

This dissertation is an investigation of lost space being reprogrammed as public space, and specifically, the architecture surrounding such a space. The author is of the opinion that stimulating and productive environments are the result of more than just an architectural shell containing some form of program.

A key determinant of this investigation was the influence of empirical theories, theories that promote an architecture that influences and shapes its surrounding environment - creating identity and shelter. This led to a sustained interest in theories surrounding unprogrammed space. Upon studying the site and precedent studies regarding unprogrammed space, it became evident that an effective unprogrammed space needs either strong established public institutions in its vicinity or the introduction of a new form of programme that provides a nucleus around which the new space can sustain itself. Sport was identified as new programme, due to the intrinsic capability of uplifting and unifying community and individuals.

Some lessons gleaned from the study:

1. Sport has an important role to play in creating safer societies, through its educational values and its inherent worldwide network.
2. Additional community benefits of sport include reduction in crime and vandalism, encouraging pride in a community and generating employment and income.
3. Sport events create opportunities for social exchange.

The terrain under investigation provided its own challenges. Movement through the original site was extremely limited, separating the site from the rest of the city fabric and creating a unsafe environment. The area has a distinct lack of identify, to this end the significance of Pretoria's vernacular of Pretoria was consider, the author using the design guidelines gleaned from this investigation to reenergize the inherent potential of the site.

This dissertation proposes an architecture that fulfils its programmatic requirements responsibly and tactfully- an architecture that is a product of its environment and social context. Not merely because it slots in with the present activities, but rather because it alters its environment through active engagement.

## Chapter 10 - References



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## Appendix

## Appendix A - Accomodation schedule

Description	Sub category	amount	dimension	Total Size	Room height	Requirements
<b>GROUND FLOOR</b>						
Toilets						
Men	Wc	4				
	Urinal	7				
	Wash hand basin	6				
Women	Wc	10				
	Wash hand basin	6				
Disabled	1 x cubicle with basin	2				
Changing rooms	Lockers	40	0.3 x 0.3m	4 m2		stacked 2 on top of one another
	Showers	6	0.9m x 1,3m	7 m2		3 for each sex
	Change space	1	2m x 3m	12 m2		for each sex
Retail		4	6m x 6m	144		
Storage (retail)		4				
Kitchen			8m x 16m	128 m2	6m	kitchen to service all take aways and have shaft to upstairs auditorium service area.
Multi - use hall		1	10m x 15m	150 m2		Place for 300 people @ 0.46 m2 per person
Addition education rooms / activity rooms		2	5m x 4m	40 m2		Place for 16 people in each room @ 1.25 m2 per person Intimate, able to open up to big hall
Storage rooms		1	3m x 4m	12 m2		Needs space to stack 300 chairs
Small kitchen		1	3 x 3m	9 m2		Simple washbasins and a oven
<b>FIRST FLOOR</b>						
Reception						
Small Office/Advisors		1	3m x 2,5 m	7,5 m2	4m	
Waiting/meeting area		2	3m x 4m	24 m2	3m	
Foyer/display area		1	4m x 4m	16 m2	3m	
Auditorium		1	9m x 15m	135 m2	6m	
	Seating area	1		92 m2	6m	Moveable seats require 0.46 m2 Seating for at least 200 with chairs, 300 without chairs. able to stack 150 chairs will be provided for under the seating area
	Storage	1				
	lobby/breakout spaces	2	adaptable		4m	
	Stage area	1		20 m2	6m	
Lift	Control room	1	3m x 4,5m	13,5 m2	3m	

Toilets		1 2m x 2m	4 m2	
Men	Wc	3		population of 200
	Urinal	6		
Women	Wash hand basin	5		
	Wc	9		
	Wash hand basin	5		
	Disabled	2		
Media centre	Office and Admin	1 4m x 5m	20 m2	0.2 m2 per user for 100 people
	Books	1 4m x 12m	62 m2	Shelves at 0.62 m2 per person for 100 people
	Reading area	1	20 m2	Caters for 0.4 m2 per person for 50 people
<b>SECOND FLOOR</b>				
Gymnasium		1 10m x 15m	150 m2 4m	requires lift for equipment
	office	1 3m x 3m	9 m2	
Changing rooms	reception	1 2m x 3m	6 m2	
	Lockers	40 0.3 x 0.3m	4 m2	stacked 2 on top of one another
	Showers	6 0.9m x 1,3m	7 m2	3 for each sex
Toilets	Change space	1 2m x 3m	12 m2	for each sex
Men	Wc	1		
	Urinal	2		
Women	Wash hand basin	2		
	Wc	2		
Private/doubles as disabled	Wash hand basin	2		
	1 x cubicle with basin	1		
Medical centre - Reception / waiting		1 3 x 4m	12 m2	
- consultation room		2 4 x 5m	40 m2	2 consultants with their own facilities
- general medical area		1 10 x 5m	50 m2	Area for rehabilitation training
Cleaning material/storage		1 2m x 1m	2 m2	
Media centre	Computer rooms	1 15m x 6m	60 m2	2 m2 per user for 30 people



## THIRD FLOOR

### Offices

General manager	1 5m x 4m	20 m2
Secretary	1 3m x 4m	12 m2
Basketball SA	3 3m x 4m	36 m2
Tshwane Suns	3 3m x 4m	36 m2
Independent organizations	3 3m x 4m	36 m2
Meeting room	2 5m x 3m	30 m2
Social space / kitchen	1 5m x 5m	25 m2

### Toilets

#### Men

Wc	1
Urinal	2

#### Women

Wash hand basin	2
Wc	2

#### Private/doubles as disabled

Wash hand basin	2
1 x cubicle with basin	1

### Plant room

## GENERAL SPORTS FIELD SIZES

Squash courts (coin operated)	1 9,753 x 6400
Soccer field (sevens rugby )	1 100 x 64
basketball court/netball	3 28mx 15m
Volleyball court	2 18m x 9m

# Appendix B - Baseline document

Criteria	Target set (ideals)	Design performance	Achieved (y/n)
<b>1 PEDESTRIAN</b>			<b>4.25</b>
1.1 Public amenities	Provision of basic public needs (shade, seating, ablutions, refreshments)	Ablutions, shade, seating, restaurants, shops	1
1.2 Routes	Routes are legible, with lighting and surfaced. Clear boundaries and movement edges	Routes with adequate lighting and slip free surfaces for wheelchair users	1
1.3 Protection	Protection from vehicles, secure environment and proper lighting	Vehicles removed from public space	1
1.4 Public transport	Presence of public transport within 200m	Busstop and Bloed Street taxi association within 300m	0.5
<b>2 CONTEXT</b>			<b>4.5</b>
2.1 Visual appropriateness	Character of development complements character of the site	Pretoria Vernacular	0.5
2.2 Historic retention	Significant buildings are preserved, buildings are re-used where possible	All significant buildings preserved or reused	1
2.3 Views	Views on the site of prominent elements of the city are preserved	View to Union Buildings on main axis	1
2.4 Physical grid	The traditional Pretoria East-West block is retained		1
2.5 Function	Functionality of intervention should not remove activity from the streets.	Programme should not influence street activities	1
2.6 Established need	Need for development in IDP's	Need for building justified	1
<b>3 PUBLIC SPACE</b>			<b>3.75</b>
3.1 Framing	Public spaces to be properly enclosed	Spaces enclosed with trees, buildings or seating	1
3.2 Permiability	Sufficient access and routes	Movement along a strong axis, 4 entrances	1
3.3 Choice	Framework dictates broad functionality on-site yet allows for flexibility in providing a range of appropriate types	Not as flexible as originally planned	0
3.4 Distribution	Presence of mixed use areas.	Multi use programme employed, types of activities include shop, entertain, sport, education	1
<b>4 SCALE</b>			<b>3</b>
4.1 Context appropriate	Buildings facing street should be of	Some current buildings only 6m	0
4.2 Human scale	Buildings and plants should relate to human scale	Trees on public routes, high buildings provided with overhangs on pedestrian scale	1
4.3 Enclosure	Public spaces to be properly enclosed	Precinct properly defined	1
4.4 Urban Morphology	Building scale should fit according to vision for the city and its immediate environment	Emphasys placed on upgrading scale of block	1
4.5 Program appropriate	Buildings should communicate civic and recreational activity	Building recreational, less civic.	0
<b>5 LEGIBILITY</b>			<b>5</b>
5.1 Functional articulation	Building fabric should be representative of its intended use.	Building reflects institutional character	1
5.2 Hierarchy	Spaces and buildings should orientate users	Orientation kept simple, lightboxes in place.	1
5.3 Connectivity	Intervention should enhance pedestrian routes and add additional routes	Emphasys placed on integrating into existing pedestrian network	1

<b>6 ADAPTABILITY</b>			<b>4</b>
6.1 Ease	New urban fabric should be able to absorb programmatic change overtime	Certain degree of flexibility	0
6.2 Megastructure	Services should be easily asseible and leave room for future expansion	Adequate shafts and underfloorbeiling space	1
6.3 Infill	Infill material should be easily adaptable and re usable.	partition walls in office space.	0.5
6.4 Vehicle dimensions	Minimum floor-to-ceiling of 3m	Min of 3.2m achieved	1
6.5 Internal partitions	Non-bearing walls	IN office space	1
6.6 Services	Ease of access	Shafts easily accessible.	1
<b>7 EFFICIENCY OF USE</b>			<b>2.5</b>
7.1 Usable space	Non usable space (ablutions, circulation) not to cover more than 20 % of site	roughly 18 %	1
7.2 Occupancy	Enclosed spaces used for minimum of 8 x 5 resulting in 40 hours use per week	Cannot be confirmed	0
7.3 Space of use	Use of space optimized through management	Space orientated around events	0.5
<b>8 ONGOING COSTS</b>			<b>3.25</b>
8.1 Maintenance	Low maintenance materials and surfaces	Correct materials used, glass fagade could prove high maintenance	0.5
8.2 Cleaning	Limited cleaning, windows easily cleanable	Glazing difficult to clean	0
8.3 Security	Overall security of the intervention	Security a design priority	1
8.4 Disruption	Easily located services and plant room, ease of access to storage rooms.	Services and plantroom adequate	1
<b>9 SITE</b>			<b>3.25</b>
9.1 Brownfield site	Site previously used	Lost space	1
9.2 Neighbouring building	Positive impact on surrounding buildings	Upgrade of entire city block	1
9.3 Vegetation	Maximum vegetation preserved on-site, additional plants added.	Most vegetation (little present) removed	0
<b>10 WATER</b>			<b>2.5</b>
10.1 Use	Water retention processes used	Underground storage tanks for site use	0.5
10.2 Rainwater	Rainwater harvested and used.	Underground storage tanks for site use	0.5
10.3 Runoff	Stormwater kept on-site		1
10.4 Greywater	Greywater recycled		0
<b>11 ENERGY</b>			<b>2.5</b>
11.1 Location	Accessibility of public transport	Taxi and Bus services close by	1
11.2 Ventilation	Passive ventilation	Skylights used for ventilation or cross ventilation Air conditioning required in auditorium/offices	0.5
11.3 Heating and Cooling		Heating/cooling only required in extreme weather conditions	0
11.4 Light fittings	Low energy use bulbs		1
11.5 Renewable energy			0
<b>12 MATERIALS</b>			<b>3.5</b>
12.1 Robust	Due to context and South Africa	Pretoria vernacular	1
12.2 Embodied energy	E.G. wood and concrete	Concrete and brick mostly used	1
12.3 Recycled materials	Use of recycled materials in construction		0

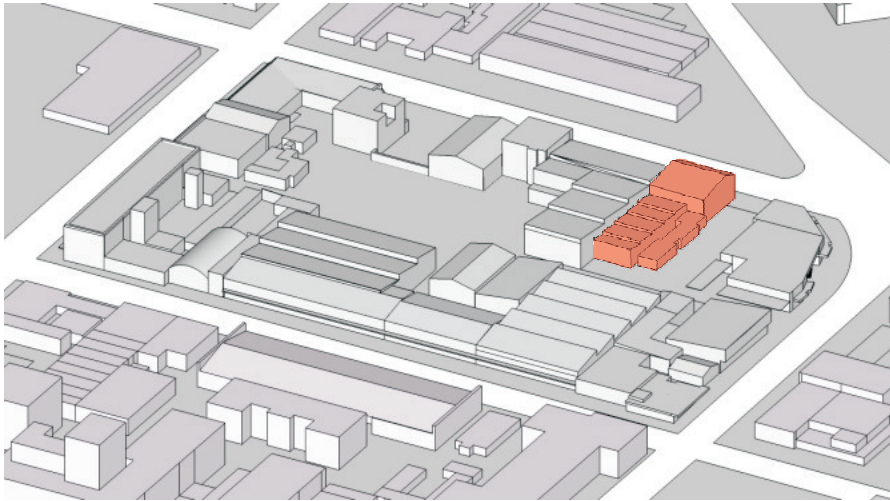




12.4 Maintenance	Materials with low maintenance	Concrete and brick low maintenance, light colour plaster and glass some maintenance	0.5
12.5 Thermal mass	In a temperate climate thermal mass is most efficient method of passive environmental control		1
<b>13 COMMUNITY</b>			<b>3.5</b>
13.1 Local manufacturers	Use of materials and manufacturers situated in Tshwane metropolitan area	Brick and concrete locally available, not Korten	0.5
13.2 Local labour	Use of local labour forces of Tshwane area.	Cannot be confirmed	1
13.3 Skills transfer	Allow for maximum involvement of community in process.	Cannot be confirmed	0
13.4 New opportunities	Proper infrastructure to allow for entrepreneurial developments	Yes	1
13.5 Increased facilities	Shared use of facilities by several parties	Yes	1

## Appendix C - Demolished buildings

C1 - Building 1



**Erf #** 3226

**Address:** 395 Struben Street

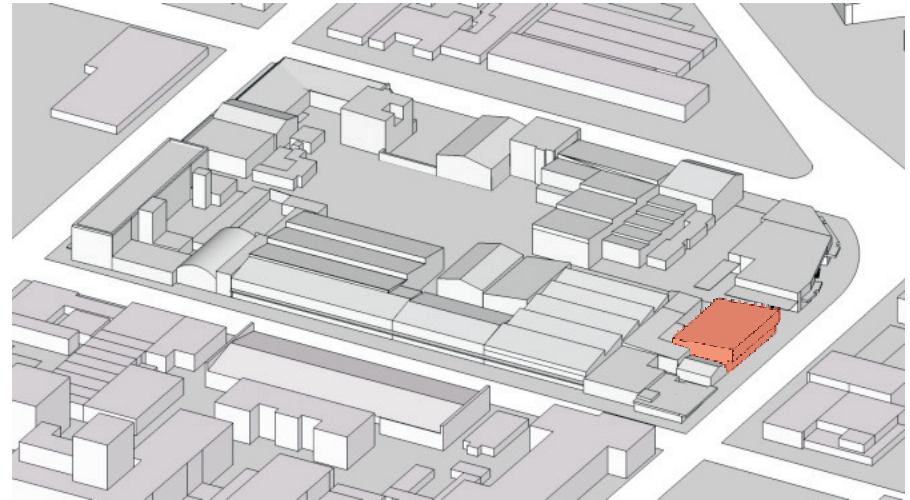
**Owned by:** City Properties

**Current use:** Unused, ad hoc additions to the adjacent warehouse, in disuse and architecturally insignificant.

**Conclusion:** Demolition advised



C2 - Building 2



**Erf #** R/2/168

**Address:** 79 Du Toit Street

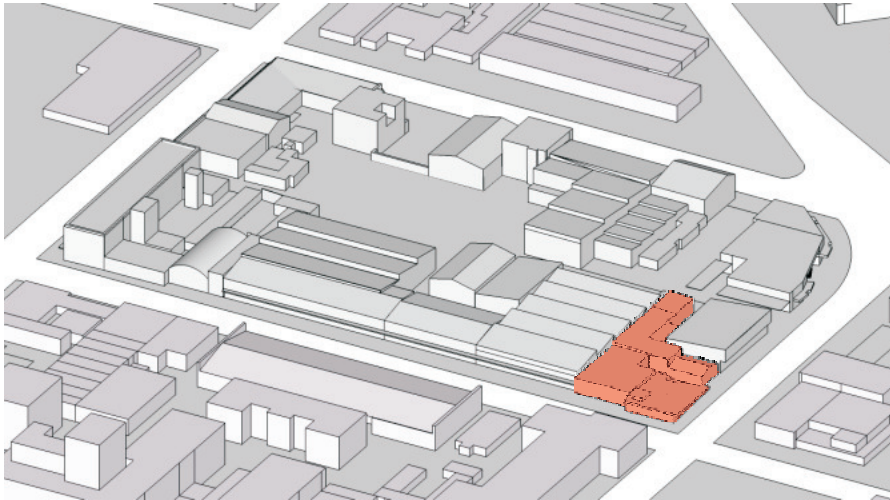
**Owned by:** Premium Ltd

**Current use:** Used by Bethesda church as a children's church and church bookstore.

**Conclusion:** Facility can easily be relocated, and is provided for in the urban planning solution.



C3 - Building 3

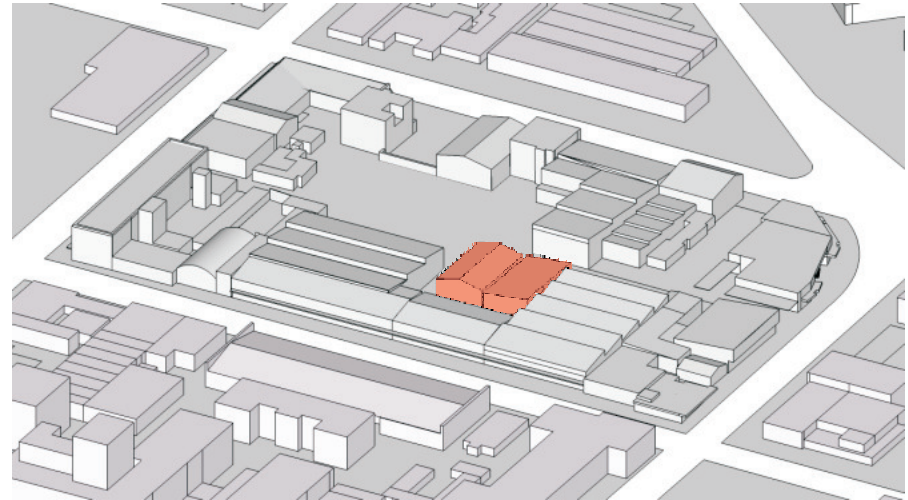


**Erf #** 1/168 and 6/168  
**Address:** 400 Proes Street & 83 Du Toit Street  
**Owned by:** Du Proes Pty Ltd.  
**Current use:** Informal vehicular repair and security shop.

**Conclusion:** Facility can easily be relocated into the incubation stalls facing Proes Street, and is provided for in the urban planning solution.



C4 - Building 4

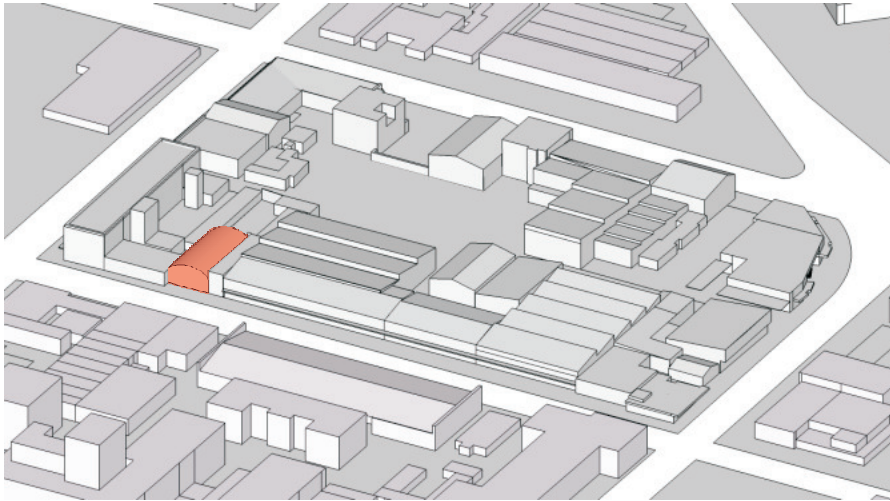


**Erf #** 3234  
**Address:** 372 Proes Street  
**Owned by:** G.L. GoldSteins  
**Current use:** Limited warehouse use.

**Conclusion:** Facility can easily be relocated.



## C5 - Building 5



**Erf #** R/164

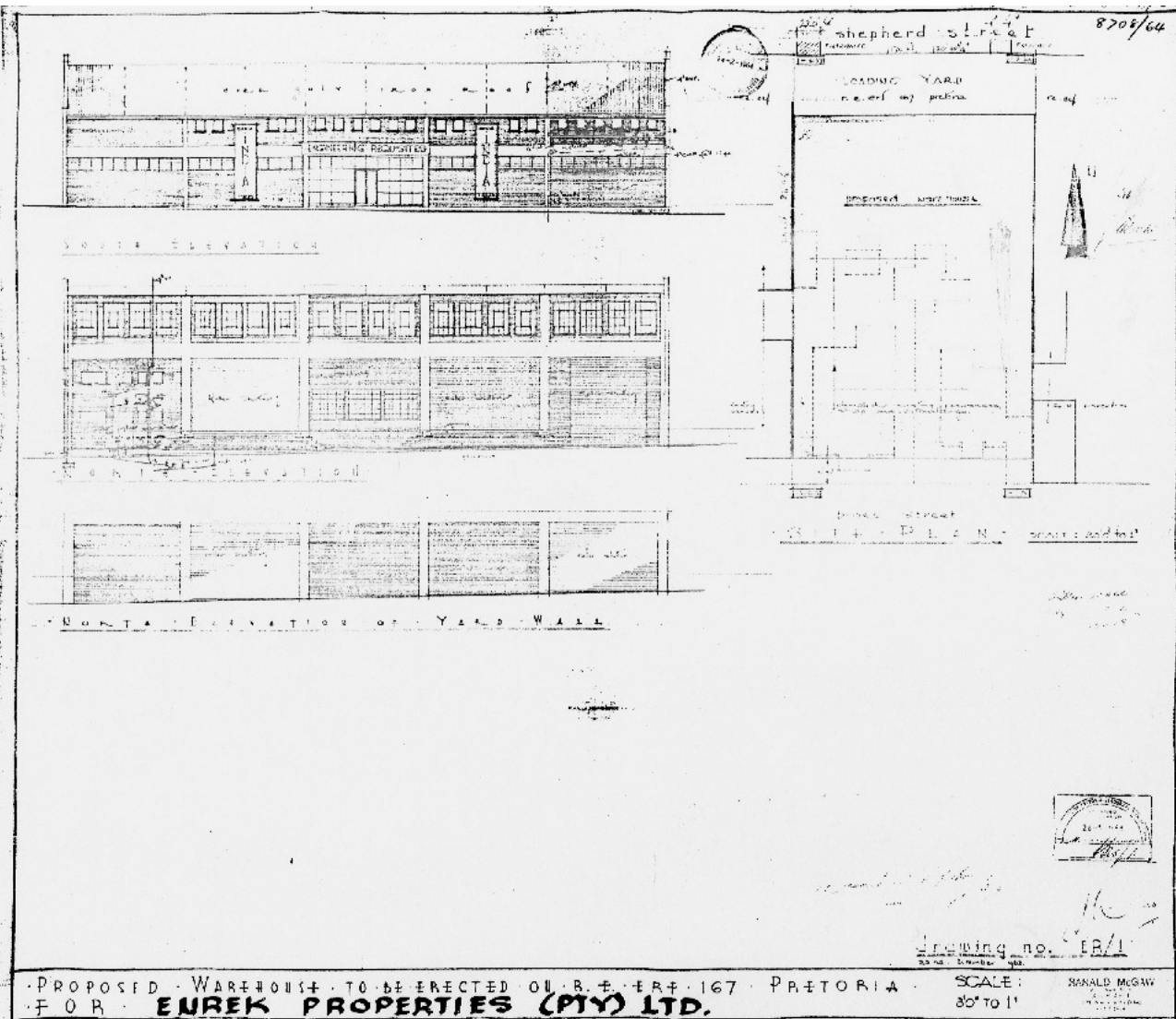
**Address:** 374 Proes Street

**Owned by:** Pretroia Pty. Ltd.

**Current use:** Informal vehicular repair

**Conclusion:** Facility can easily be relocated into the incubation stalls facing Proes Street, and is provided for in the urban planning solution.





PROPOSED WAREHOUSE TO BE ERRECTED ON R.F. EXT. 167 PRETORIA  
FOR EUREK PROPERTIES (PTY) LTD.

1 2 3 4 MICROBOX 5 6 7 8 9

