



## 05. A Site in Tension

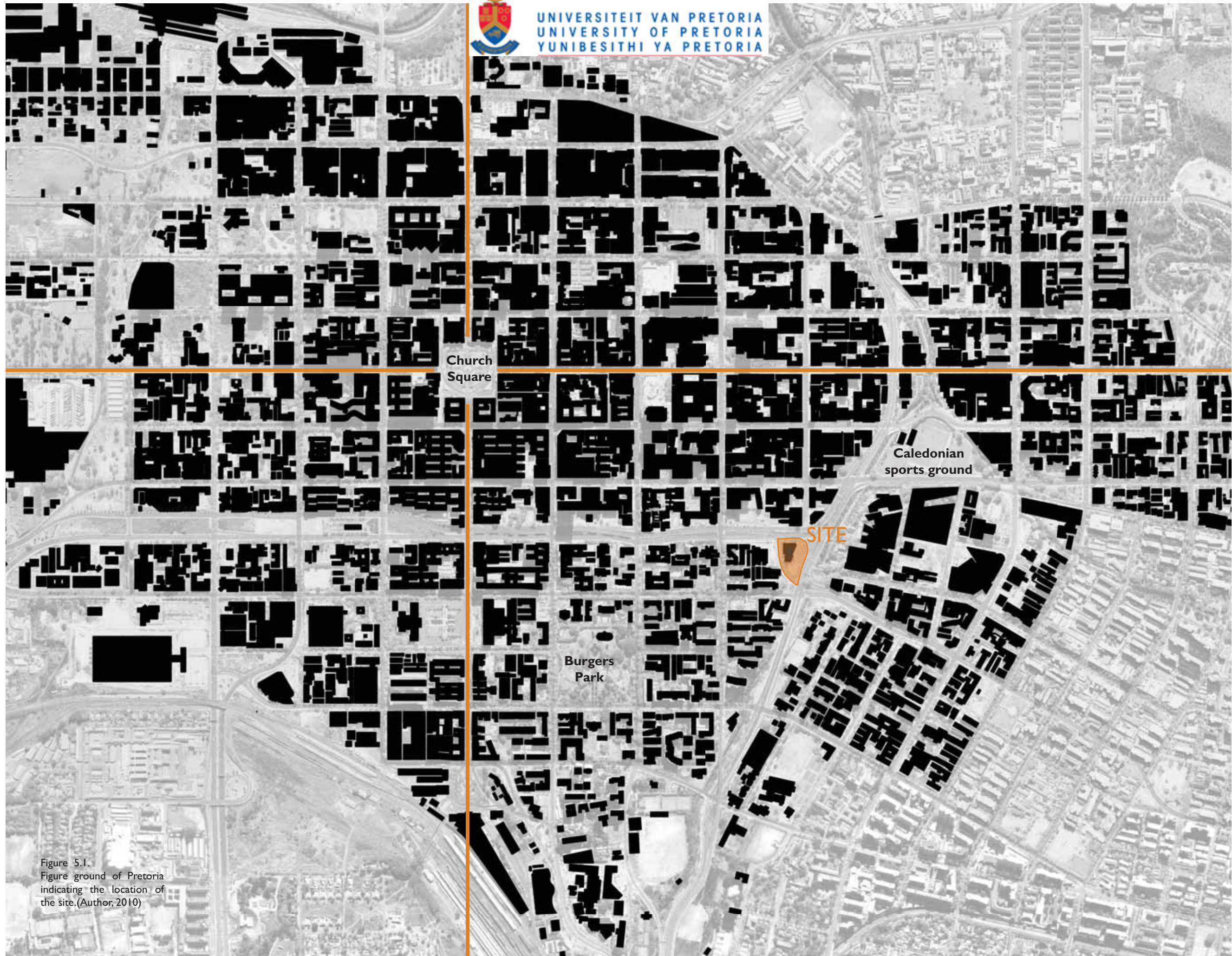


Figure 5.1.  
Figure ground of Pretoria  
indicating the location of  
the site. (Author, 2010)

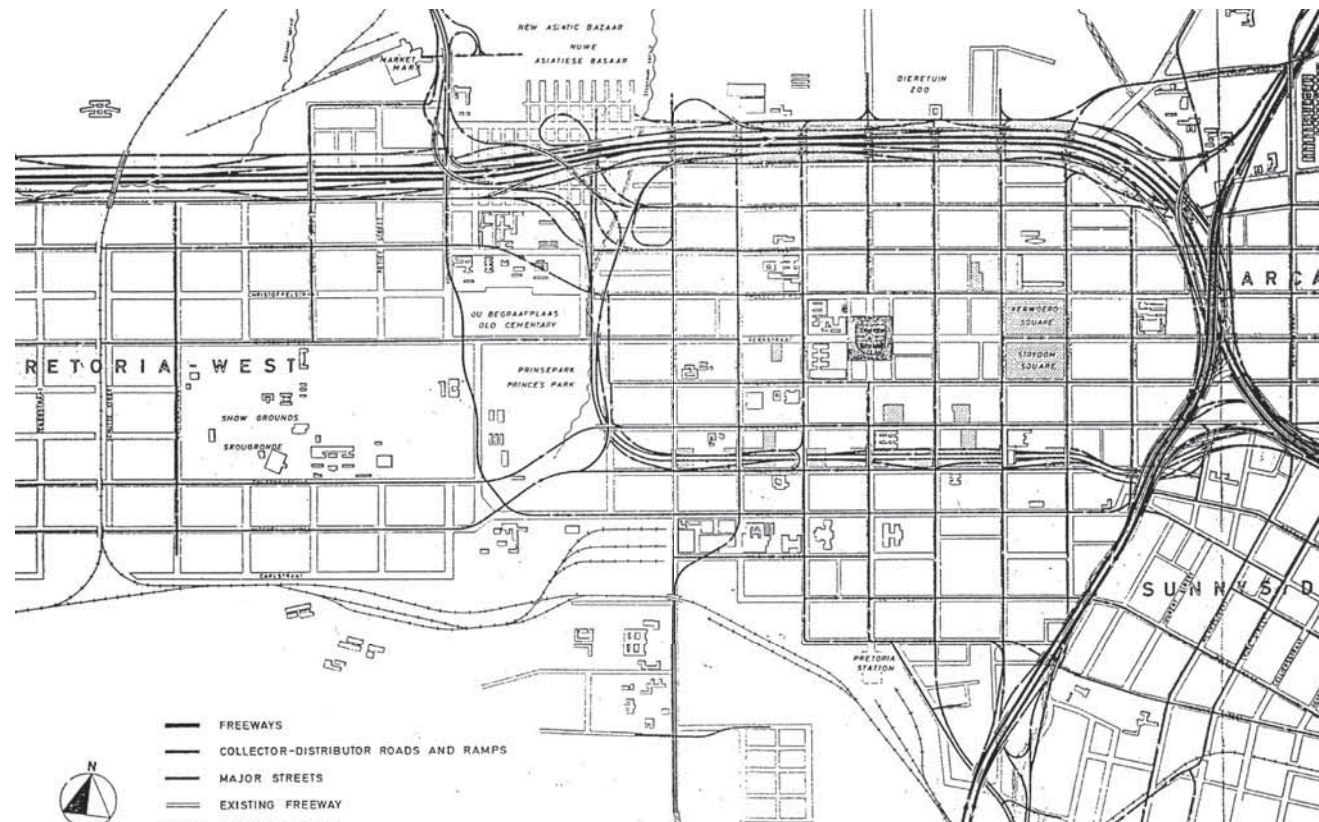


As a result of the social and economic tensions that exist within the city of Pretoria, visible spatial reactions are occurring. A site that best represents the tensions that are present within the city is the urban island at the intersection of Nelson Mandela and Skinner Street. The formation of the isolated urban island was the result of a decision to propose a ring-road freeway system around the inner city as to alleviate congestion within the city centre. This decision was politically based but practically motivated to provide the city's citizens easier access to and from the city to limit congestion. Construction of the ring-road had begun, but owing to insufficient funds (economic tension) it was not completed. Certain parts of the city have been affected by the proposed ring-road system which has led to the formation of isolated urban islands.



Figure 5.2 (below)  
Proposed ring-road around the city of Pretoria which created the formation of an urban island. (Architecture Archives, University of Pretoria, 2010)

Figure 5.2 (opposite)  
Aerial photo of the site (urban island) and the surrounding context (Geography department, University of Pretoria and overlay by Author, 2010)



Economic tension between the formal and informal is evident on the site. The site currently consists of the Berrals building which is a five storey apartment block. Against the wall of the Berrals building, homeless people have claimed the space as their sleeping area. There is a tension created between the formal resident being able to afford to rent an apartment within the Berrals and the informal homeless person, sleeping in lost space.

There is further tension created between that of corporate advertising and graffiti. The Berrals building has a billboard attached to its south facade and underneath this corporate billboard a citizen has expressed himself by 'tagging' the building in the form of graffiti. Both advertising and graffiti function on a phenomenological level as to awaken the viewer's curiosity. Advertising views the citizen as a consumer and tries to sell citizens a way of life. Advertising is based on the idea of that public visual space is a read only environment. Graffiti artists on the other hand make it their main mission to reclaim city space either as a reaction against consumerist advertising or the need to make a personal mark on their environment. Graffiti as with other forms of

public art draws attention to city spaces and makes the viewer re-examine city spaces. It challenges the ownership of space by councils and corporations (Manco 2004: 11)

The graffiti that is drawn on the Berrals building brings the viewers attention to its isolation on the urban island. The graffiti is an attempt to reclaim the lost space of the urban island. Even though the urban island sits within a major intersection within the grid of Pretoria (the point at which the grid of Pretoria shifts), the urban island has become anti-space, making no positive contribution to the surrounding areas and its users. The urban island's edges are ill-defined and it fails to connect elements in a coherent manner (Trancik 1986: 4).

Figure 5.3 (opposite)  
Photograph indicating the relationship between the formal + informal and the corporate + citizen (Author, 2010)

Figure 5.4 (below)  
The Berrals building - A 5 storey apartment block isolated on the urban island (Author, 2010)



The urban island is completely isolated from the vibrant activity and transition of people moving from Sunnyside (residential district) into the city centre (work) and vice versa. This activity occurs on the periphery of the isolated island. The site deals with the social tension of universality and identity as there are a multitude of publics (people of different races/religions/cultures etc.) that pass the periphery of the site on a daily basis and these multiple publics need to be accommodated.

The urban island (site) is situated within an intersection of different functional areas. Jane Jacobs refers to city diversity as itself permitting and stimulating more diversity (Jacobs 1961: 157). Yet, this is not the case with regards to the site in question. Esselen street which runs perpendicular to the urban island caters for the cities diversity and permits and stimulates a variety of functions along it by allowing for city enterprises of all degrees of size. A lively city scene (Esselen Street) is lively largely by virtue of its enormous collection of small elements of diversity: the spaza shops, hairdressers, mechanics & music stores etc. The variety of retail trade ends when Esselen Street terminates at Nelson Mandela Street (Jacobs 1961: 160).

Jacobs speaks of commercial diversity as being immensely important for cities, socially

as well as economically. A city district that contains an exuberant variety and plenty in its commerce contains other kinds of diversity as well, including variety of cultural opportunities, variety of scenes, and a great variety in its population and other users. The same physical and economic conditions that generate diverse commerce are intimately related to the production, or the presence, of other kinds of city variety. However this does not mean that cities automatically generate diversity just by existing. They generate it because of the various efficient economic pools of use that they form. Whenever cities fail to form such economic pools of use, the struggle to generate diversity is like that of a small settlement (Jacobs 1961: 160).

••••• Pedestrian movement



Figure 5.5 (opposite)  
Aerial photograph indicating functional areas and pedestrian movement (Geography department, University of Pretoria and overlay by Author, 2010)

Figure 5.6 (below)  
The urban island in isolation and failing to connect elements of the city together (Author, 2010)





Figure 5.7. (above) Corner of Nelson Mandela Drive & Skinner Street. (Author 2010)



Figure 5.8. (above) The urban island that runs in the middle of Nelson Mandela Drive that pedestrians use to travel into the city. (Author 2010)



A collection of panorama's showing the existing movement of people that travel from Sunnyside to the inner city and vice versa. The majority of movement traverses across Nelson Mandela and Skinner Street which are extensively car dominated streets.

Figure 5.11. (left) - Aerial of the Site. (Author 2010)

Figure 5.12. (below) - Corner of Nelson Mandela Drive and Kotze Street. (Author 2010)



Figure 5.9. (far right) - Movement along the urban island. (Author 2010)

Figure 5.10. (right & below) - Movement across Nelson Mandela Drive. (Author 2010)



Jacobs highlights four conditions that are indispensable in order to generate exuberant diversity in a city's streets and districts (Jacobs 1961: 162):

1. The district, and indeed as many of its internal parts as possible, must serve more than one primary function; preferably more than two. These must ensure the presence of people who go outdoors on different schedules and are able to use many facilities in common.
2. Most blocks must be short, that is streets and opportunities to turn corners must be frequent.
3. The district must mix buildings that vary in age and condition, including a good proportion of old buildings so that they vary in the economic yield. This variation of buildings must be fairly close-grained.
4. There must be a sufficiently dense concentration of people, for whatever purposes they may be there. This includes dense concentration in the case of people who are there because of residence.

The combination of these four conditions creates effective economic pools of use. The absence of any one of the four conditions frustrates a district's potential. The lack thereof of the relationship of commercial, retail and living in and around the urban island is evident. The surrounding context (district) has met conditions 2-4 but still needs to address the condition of having more than one function and becoming hybrid in nature addressing the needs of multiple publics. Since the site is at the intersection of different functional areas there is the opportunity for the site to become landmark.

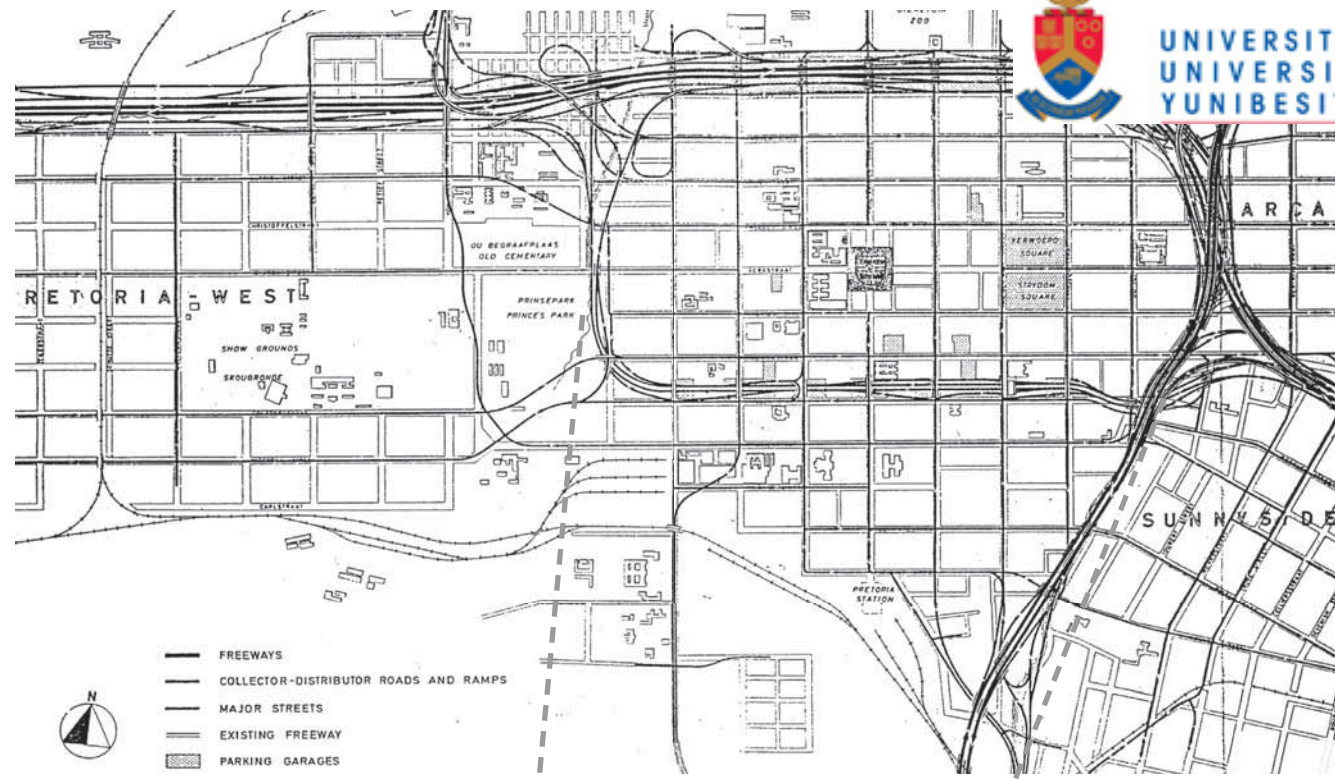
The urban island is in isolation from the rest of the city as a result of the site becoming lost space. The site has no external connections with the existing surrounding fabric. The Berrals building remains as an isolated tower on a landscape that does not connect to the surrounding urban fabric. The only connection it has with the city is that it becomes an informal thoroughfare for people who live in Berea and want to get to the city. The dominant path from Sunnyside to the city that runs along the periphery of the urban island is not well-defined and clear. It does not have a well defined path destination and origin point.

People tend to think of path destinations and origin points when they travel the city. People like to know where paths came from and where they lead. Paths that have clear and well-known origins and destinations have stronger identities and help tie the city together giving the observer a sense of bearing whenever he crosses them (Lynch 1960: 54). The major pedestrian routes along Esselen and Du Toit street that run past the urban island are not clear and are ill-defined.

Social, economical and programmatic tensions have been explored at a city scale and have informed the selection of an appropriate site. The urban island exists in isolation and is in tension with its surrounding context. Tensions exist between the urban island and the surrounding urban fabric. These tensions are to be investigated to act as a design generator for both program and architectural intervention.



Figure 5.13. Aerial photograph indicating the isolation of the urban island due to the dominance of vehicular movement over that of pedestrian movement (Geography department, University of Pretoria and overlay by Author 2010)



### Macro Scale

The effect the ring-road would have had on the city as a whole. The ring-road would have further fragmented the city creating barriers between different parts of the city.

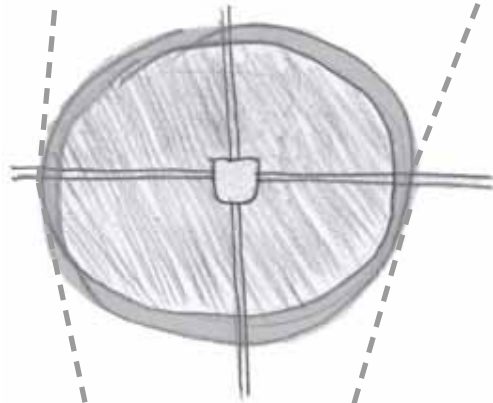
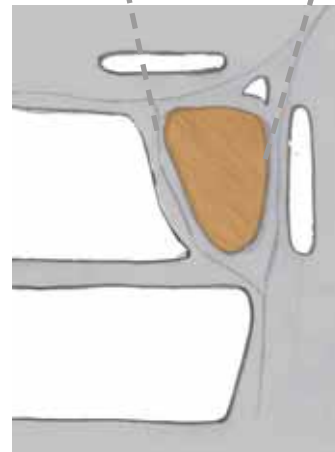


Figure 5.14. (top)  
Proposed ring-road around the city of Pretoria which created the formation of an urban island. (Architecture Archives, University of Pretoria, 2010)

Figure 5.15. (middle)  
Pretoria city in isolation. (Author 2010)

Figure 5.16. (right)  
Urban island in isolation. (Author 2010)



### Micro Scale

The isolated island is an example on a micro scale level of the effects the proposed ring-road would have had on the city and its urban fabric.

## Historical Tension

### Old | New

The site is in 'historical' tension due to the massive changes that occurred around it over time. It has been removed from the existing urban fabric and as a result been left as an urban island. Esselen Street originally culminated at the eastern edge of the site at a T-junction which linked to Du Toit Street which ran along the eastern edge of the site northwards. These sections of road have been removed due to the widening of Skinner and Nelson Mandela Street. The site now exists in isolation removed from its city block.

The Berrals building, built in 1958, is situated on the urban island and can be identified as being a place of historical and national significance. Its importance can be attributed to the designer, Wynand Smit of the architectural firm Smit and Viljoen, who contributed to the establishment of Pretoria Regionalism in the Transvaal (Gerneke 1998:216) and the fact that the building is one of the last few examples of Brazilian influenced Pretoria Regionalism.

Areas within the built environment that have cultural or significant value are being threatened, damaged or destroyed by urban development. This more than often leads to irreversible cultural, social and economic losses (Washington charter 1987). Heritage

and development are therefore inseparable entities that foreshadow the concept of 'sustainability' – preserving a cities heritage for the benefit of future generations. Culture is the bridge between the two, the vital ingredient for kneading a harmonious balance between past, present and future (UNESCO: 2002).

When approaching the design of a new building on or near a culturally significant site (such as the Berrals building), certain conservation principles (Burra Charter, Vienna Charter, and Washington Charter) need to be taken into account. This is done in order to ensure that appropriate decisions are made when going ahead with such a development. The conservation principles should help guide the design in such a way that the new building will be able to harmoniously adapt to its historical context as well as contemporary life. Existing culturally significant buildings allow the opportunity for a new development to gain richness and a new insight in the way in which its spaces and functions are to be arranged. The significant building can act as a design generator thereby influencing the design of the spaces within the new development and in turn extending the buildings history and life, giving it a new identity and existence.



Figure 5.17. Aerial photograph taken in 1948. No urban island exists. (Geography department, University of Pretoria, 2010)



Figure 5.18. < 1997 : Road layout before the construction of Nelson Mandela Drive & Skinner Street (Author, 2010)



Figure 5.19. Aerial photograph taken in 2005. The formation of the urban island is evident (Geography department, University of Pretoria, 2010)

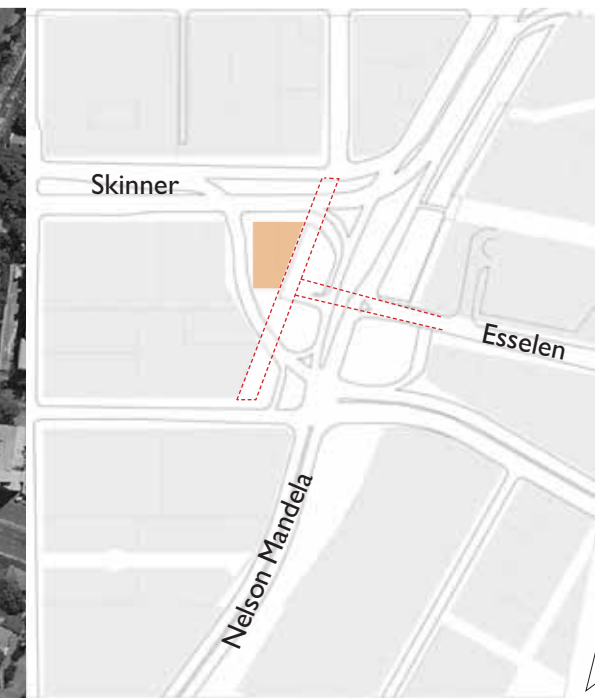
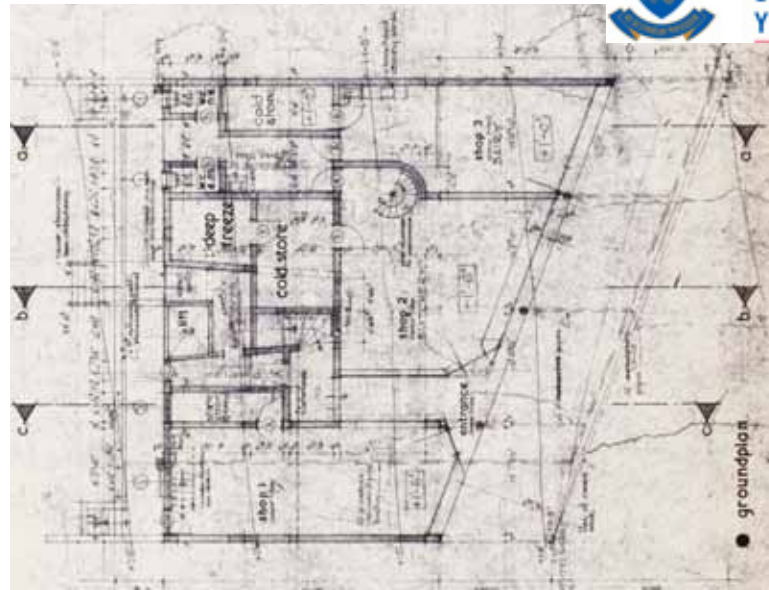


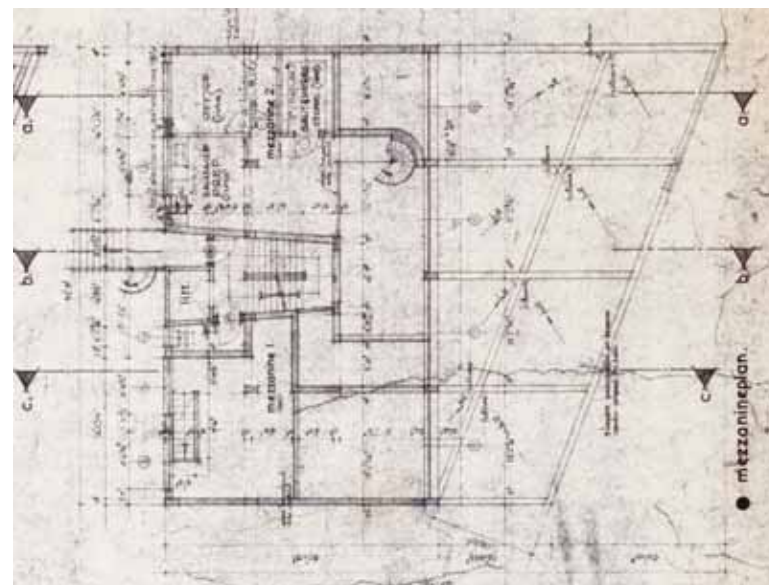
Figure 5.20. > 1997 : Road layout after the construction of Nelson Mandela Drive & Skinner Street (Author, 2010)



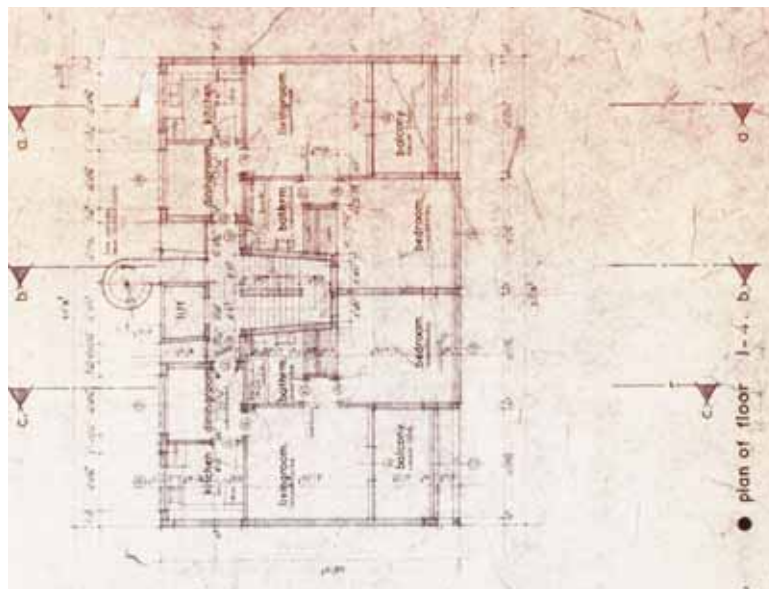
Ground floor plan :  
Shops such as a butchery  
and a dairy were located  
on ground floor.



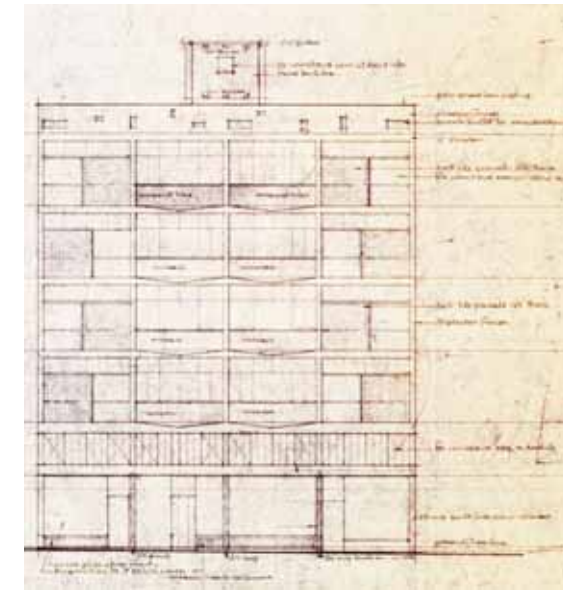
Mezzanine floor plan



1-4 floor plan :  
Residential Units



West Elevation



Section A-A

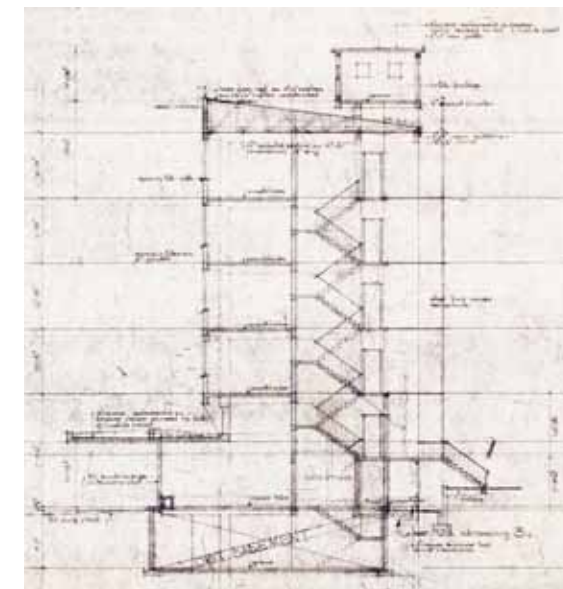
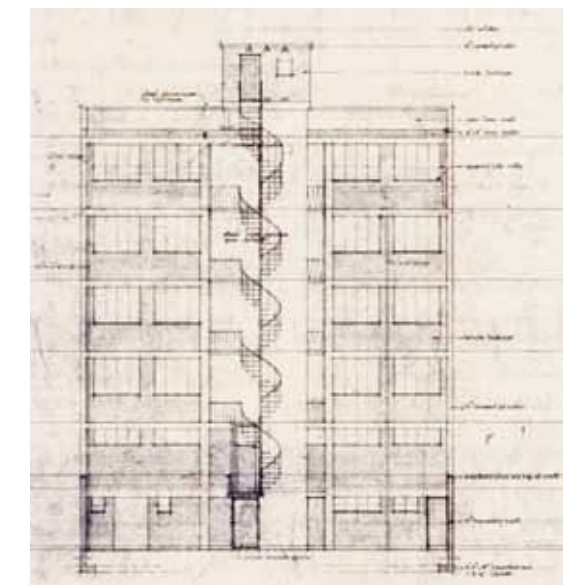


Figure 5.21.  
Original Drawings of the Berral's Building(Archive,  
Department of Architecture, University of Pretoria,  
2010)

> 1997



Figure 5.22.  
Du Toit street ran alongside the Berral's building and into the city. Pedestrian activity is evident along the pavements edge. The building was then part of the city fabric (Archive, Department of Architecture, University of Pretoria, 2010)



Figure 5.24.  
Vibrant activity along the street front of the Berral's building (Archive, Department of Architecture, University of Pretoria, 2010)

2010



Figure 5.23.  
The Berral's building in its current isolated state. As a result the ground floor shops have been removed and converted into residential apartments (Author, 2010)



Figure 5.25.  
The ground floor of the Berral's building consisted of shops such as a butchery and a dairy (Archive, Department of Architecture, University of Pretoria, 2010)

### Precedent: Pratt Institute Art School Extension

Location: Brooklyn, New York, USA (1997 - 2005)

Architect: Steven Holl Architects

Program: Public and educational amenities: lobby, gallery, studios, auditorium, workshops

Concept:

The Higgins Hall, which houses Pratt Institute's architecture programme, formerly consisted of three separate historic landmark buildings. In 1996, the central building was destroyed in a fire leaving the two remaining buildings isolated. The new building stitches the buildings back together. The difference in floor levels between the two historic buildings, which increases sequentially from a mere 12 mm at ground level to 2 m on the fourth floor roof, was the key factor in shaping the scheme. The new insertion pulls out existing floor levels from the two remaining buildings and the fault line where these floor levels meet is reconciled by a ramp that creates an extended promenade traversing between street front and garden back of the building (Lecuyer 2006: 54).

The building uses modern materials to sensitively stitch two historic buildings together while creating a new identity and landmark on the street. The new addition deals with creating a new public space on street level and the experimentation of different materials. The use of polycarbonate gives the front facade of the building a clean repetitive look that is in contrast to the historic buildings on either side of it. This contrast is respectful to the historic buildings while still being able to retain its own distinct identity. (Lecuyer 2006: 54-57)

#### DESIGN CONSIDERATION:

This precedent demonstrates a sensitive resolution in stitching the old with the new while still creating a landmark building with its own distinct identity. The distinction between the old and new is emphasised by the lightness of the new tectonic contrasted with the solidity of the old.

Figure 5.26.  
The stitching between new and old.  
(Holl, 2010)



Figure 5.27.  
Exterior view - The successful resolution between new and old.  
(Holl, 2010)



Figure 5.28.  
Interior view of the ramp promenade that connects the two historic buildings.  
(Holl, 2010)



Figure 5.29.  
Section showing the ramp that creates an extended promenade between street front and garden back.  
(Holl, 2010)

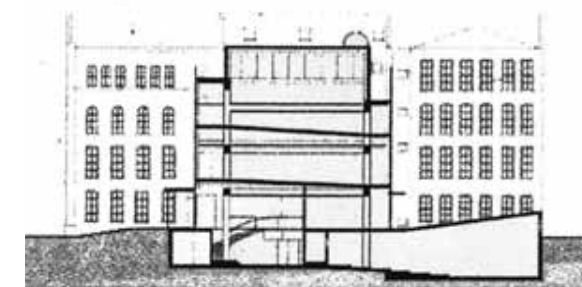


Figure 5.30.  
The resolution between the varying levels of the two historic buildings.  
(Holl, 2010)



## Physical Tensions

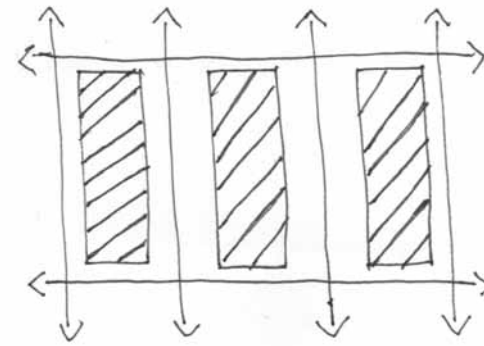
Passive | Active + Pedestrian | Vehicular



Passive | Active

The urban island has become a passive entity with the city functioning around it. There are high levels of pedestrian and vehicular movement all along the edges of the site. Esselen Street with its highly active mixed-use energy of different activities ends abruptly as it meets Nelson Mandela drive. Yet, some activity is carried through on the periphery of the site with appropriation of space by informal traders occurring along a small island that is currently used by pedestrians to cross Nelson Mandela drive. The urban island remains passive while the surrounding context is highly active.

Mobility, motion, and the automobile have become tools for isolation. Highway systems have created the need for a complex pattern of connector roads within the city. To disperse traffic from the major highways into the narrower network of streets, the street system of Pretoria was drastically altered as can be seen with the construction of Nelson Mandela drive and the widening of Skinner Street. These two main arteries along the north and east edges of the site are dominant structuring elements in the city. The widening of both Skinner and Nelson Mandela Streets has affected both pedestrian and vehicular movement in this area. These two main entry and exit routes for the city have structured a hierarchy of transport routes that vehicles and pedestrians use to move through the city. Vehicular



Pedestrian | Vehicular

movement in this instant has taking preference over that of pedestrian movement (Trancik 1986: 6 -7).

Du Toit Street which once ran alongside the Berrals building has been removed by the construction of these two main arteries thereby enforcing the notion that the street has lost its social meaning as a multi-purpose space. Districts around the urban island do not interact with it anymore. The urban island has become an isolated homogeneous enclave. The desire for order and mobility has undermined the need for diversity and richness of urban public life (Trancik 1986: 6 -7).

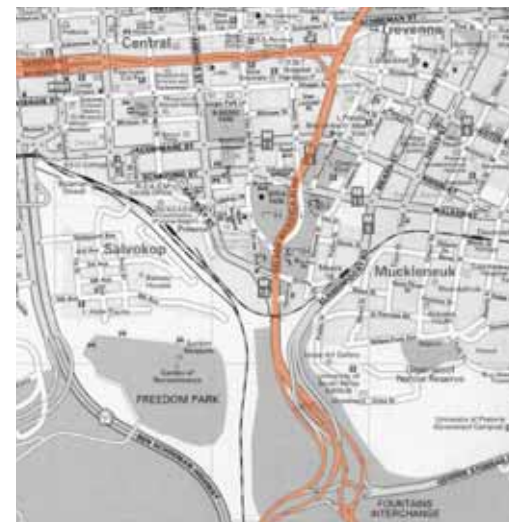


Figure 5.31. Arterial roads, Nelson Mandela drive and Skinner street, connecting the city to the highway system. (Map Studio and overlay by Author, 2010)



Figure 5.32. Aerial indicating the movement of pedestrians and vehicles. (Geography department, University of Pretoria and overlay by Author, 2010)

## Precedent: Olympic Sculpture Park

Location: Seattle, USA (1999-2007)

Architect: Weiss/Manfredi Architects

Program: A new model for an urban sculpture park: A pavilion, an urban park and large-scale art installations

Concept:

Weiss/Manfredi's design was envisioned as a new model for an urban sculpture park that incorporates architecture, landscape and urban infrastructure. The design was conceived as a continuous surface that unfolds as a landscape for art wandering from the city across highway and rail lines to reach water's edge. The site which was once a fuel storage and transfer facility remained unused and became lost space within the city. The site was built up of three parcels of land that were split up by a main arterial road and train tracks. The new design of the sculpture park unites these separated three parcels of land. This was done by designing a z-shaped pedestrian path that cuts through the new park bridging over the railway lines and the arterial road in order to connect urban core (the city) to the revitalized waterfront (Phaidon 2008: 627 and Weiss/Manfredi 2010).

### DESIGN CONSIDERATION:

Creating a pedestrian path that bridges railway lines and an arterial road, the site is able to connect to both the city and its surrounding regions while accommodating for vehicular and pedestrian movement. The interstitial spaces between the paths and the edges of the site allow for a variety of spaces that have been created by the landscape that will elicit responses from artists that will create artwork for the park. The Olympic Sculpture Park therefore addresses ever-changing views of the role of a park in the city and art in the landscape.

Figure 5.33. Concept model and sketch (Detail, 2010)

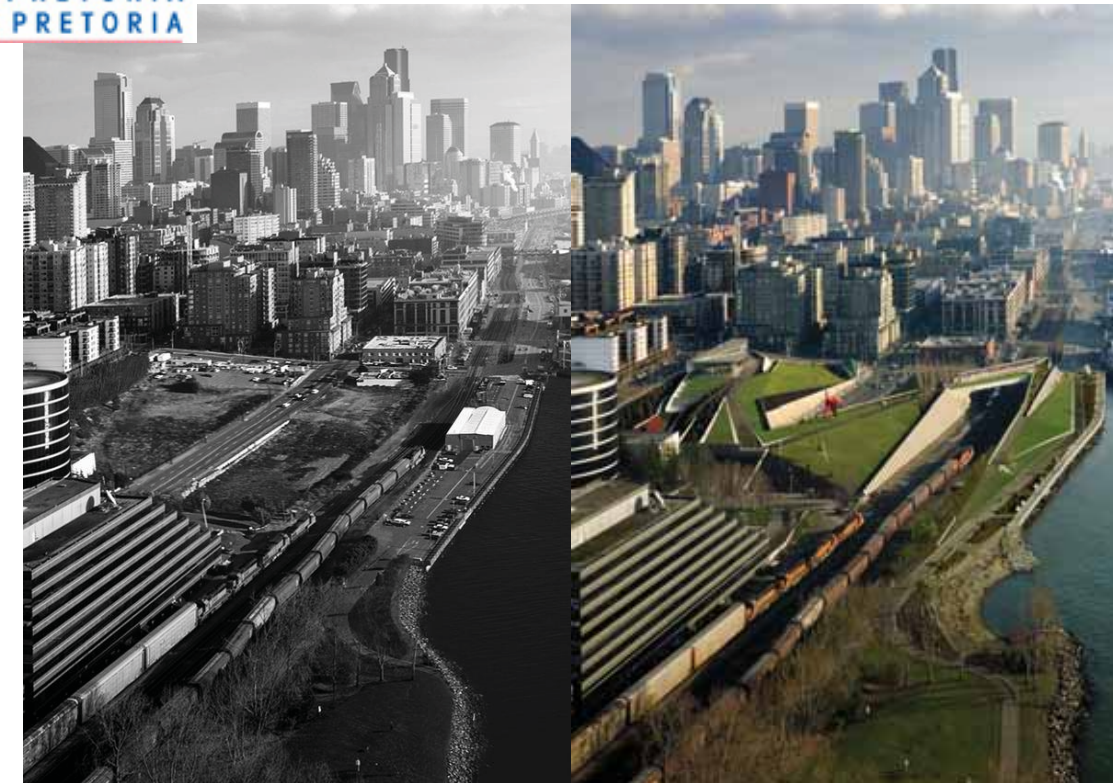
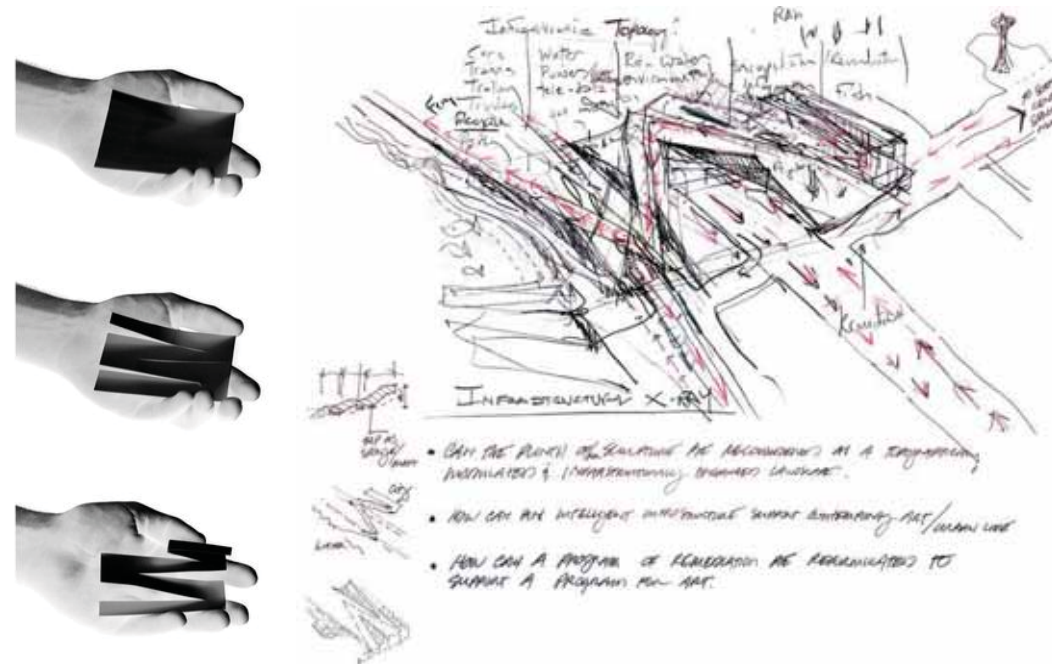
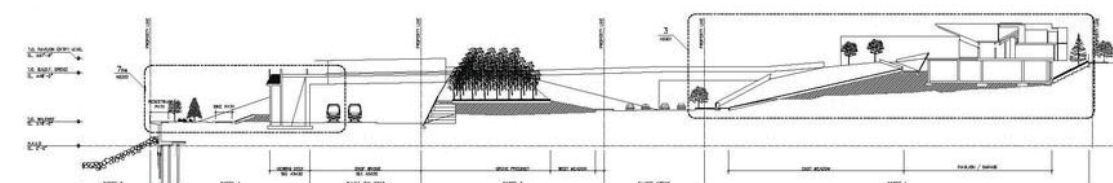


Figure 5.34. The site before and after the sculpture park was built. (Detail, 2010)



Figure 5.35. Pedestrians using the z-shaped path that traverses above vehicular traffic. (Detail, 2010)

Figure 5.36. Section through the urban park, railway line and arterial road. (Detail, 2010)



## Object | Subject



The placement of buildings affects the manner in which people interact with them. The Berral's building (object) left on the urban island has lost its responsiveness to the urban fabric. It is a free-standing building that does not respond to the greater urban fabric and is in tension with the surrounding context (subject). It related to the surrounding urban fabric when it was part of the city environment. Since then, the city has developed around the urban island leaving the existing building in isolation. The urban island and its contents have become lost space.

The continuity of landscape that should connect the city with surrounding regions is interrupted and the buildings do not form a coherent link into the city. Redefining the kind of space that gives structure to urban environments allows for environments in which connective space, instead of individual buildings, can knit together the city fabric (Trancik 1986: 23).

The city has singled out the urban island and as a result the Berral's building varies in scale to its surrounding context. Lynch describes the creation of a landmark as physical elements of the city that vary widely in scale. He further describes that a landmark will become more identifiable and more likely to be chosen as significant if they have a clear form; if they contrast with their background; and if there is some prominence of

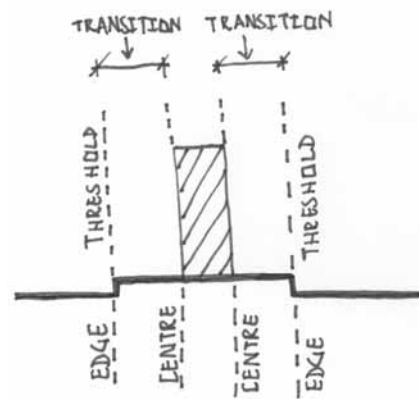
spatial location. The Berral's building satisfies all of Lynch's definitions of the creation of a significant landmark. The building has a clear form and is situated at the intersection of 2 major arterial roads. The building is set-back from the edge of the urban island and is in contrast to its surrounding context. It can be seen that the isolation of the Berral's building and the recognition it receives as a landmark is as much dependant on context as on the form of the object itself (Lynch 1960: 78 – 85).

Figure 5.37  
The Berrals building as a significant landmark.  
(Author, 2010)



## Spatial Tensions

### Centre | Edge



Edges in all senses represent places of tension, of intensification and often of conflict. Porter (2004: 66) states that edge conditions refer to the places where social territories meet. The existing urban island is situated at the intersection of four functional areas that contain their own unique social characteristics which require special attention as they mediate between very different social and physical conditions, generating complex and often competing priorities (Porter 2004: 66). The urban island has ill defined edges and fails to create boundaries that coherently connect different elements of the city together.

Porter describes gateways as defining the intersections of pathways and boundaries. A gateway marks boundaries and edges in order to create psychological transitions between 'conscious' and 'unconscious', 'past' and 'future' and physical transitions between 'inner' and 'outer', 'public' and 'private'. It also marks the difference between a sense of 'arriving' and a sense of 'arrival'. They form an integral part of boundaries, and interface between different kinds of activities. The urban island is situated in such a position that it can act as a gateway into the city yet the sense of transition that can be created by changes of topology, light and surface is not evident due to its detachment from the urban fabric.

Figure 5.38.  
Ill-defined edges around the urban island and along Nelson Mandela and Skinner Street (Housing Module Group, 2009)



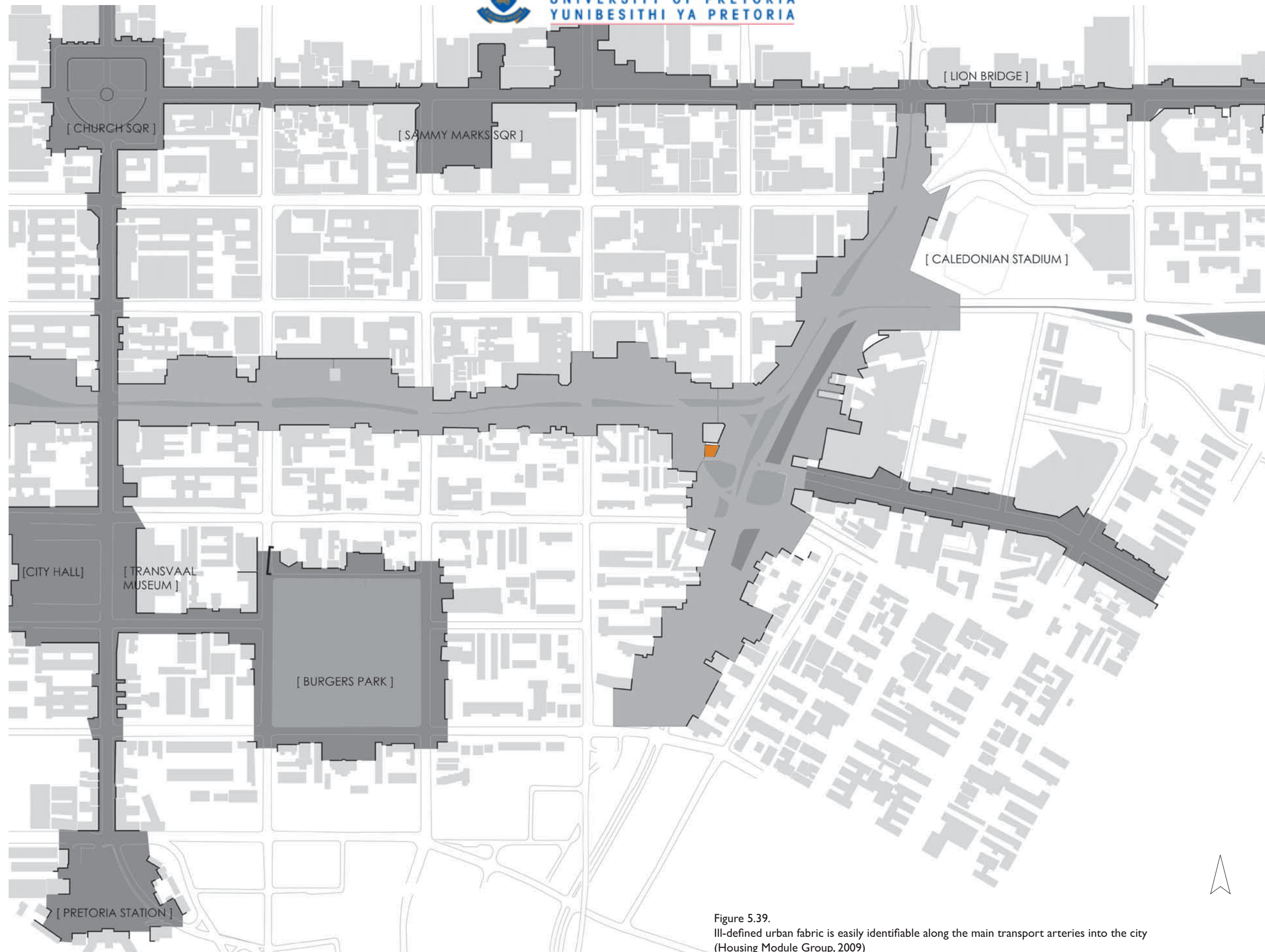
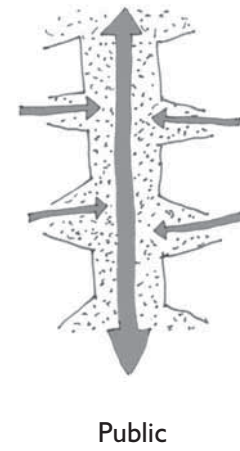
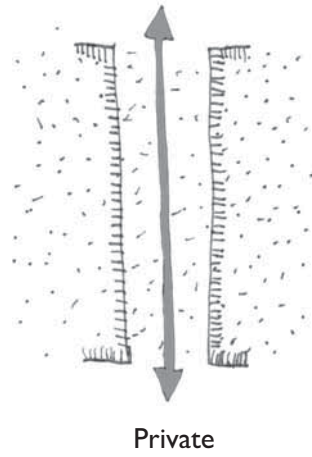


Figure 5.39.  
Ill-defined urban fabric is easily identifiable along the main transport arteries into the city  
(Housing Module Group, 2009)

Public | Private



Public spaces in the city can be inviting and easy accessible and thus encourages people and activities to move from the private to the public environment. Yet, public environments will either invite or repel subjects based on how the public environment is placed in relation to the private and how the border zone between the two areas is designed. Flexible boundaries in the form of transitional zones that are neither completely private nor completely public will often be able to function as connecting links, making it easier, both physically and psychologically, for people and activities to move back and forth between private and public spaces, between in and out (Gehl 2006 : 113).

The transitional space between that of the private residences of the Berral's building and the public environment is not defined. Physically and psychologically the transition between moving from the private to a public environment is disorientating. As a person moves out of the apartment block into the public environment they are left in no man's land and are disoriented. There is no transitional zone between the public and private.

Figure 5.40.  
The Berrals building isolated within "no man's land".  
(Author, 2010)



## Design Objectives

The tensions that have been identified have helped to formulate objectives for the program for the new architectural intervention.

These objectives are:

- Creating the African metropolis as a cosmopolitan entity, a place where all differences mix together, whether ethnic, racial or religious.
- Understanding the importance of flux, flow and connectivity. These elements have been and still are what make a city what it is.
- The design of democratic environments that are inclusive rather than exclusive.
- Returning the memory of how the urban island functioned before it was isolated.
- Establishing the importance of the urban island as an intersection of various functional areas.
- Establishing the urban island as a point of linkage and connectivity thereby maximising connectivity and legibility of the urban fabric.

The influence of a city does not depend on how strong its industries are, how extended its infrastructures are or how big its finances are. It is rather dependant on how ready the city is to transform its material power into cultural and symbolic capital. Three things make up the notion of a cultural and symbolic capital (Bremner 2004: 13):

- A series of formal institutions: museums, libraries, theatres, monuments etc.
- A set of public life infrastructure: parks, cafes, boulevards, restaurants, clubs – without which urban life is hardly possible.
- A series of cultural practices and a place to debate which offers the city a self representation of itself.

Everyday life is characterized by moving between various settings and experiencing different environments rather than being defined by a single building (Kaiji 2001: 83). The proposed site for the architectural intervention is located at the intersection of several functional areas. On the periphery of the urban island, transition occurs

whereby people move from Sunnyside (the place they live) to the city centre (the place they work). This is the quickest and safest route to move from Sunnyside to the city centre. As a result the passage along which people traverse along is always busy throughout the day and is a passage of transition from one area of the city to another. Can this passage of transition be redirected onto the urban island thereby establishing a new relationship with the existing urban fabric?

There is a clear distinction between where people live, work and play. Yet, as a result of new modes of transport and communication, the four urban functions of working, living, leisure and transport, which Le Corbusier deployed in his model of the city, can no longer be separate from one another either spatially or socially (Bouman, Mulder 2002 : 72 - 74). This lends itself to a program that is hybrid in nature. A mixed-use program that creates a new attractor for the district not detached from everyday life – a public intellectual playground for citizens. The new architectural intervention will be a hybrid conception of society and space.



Figure 5.41.  
A Hybrid of Relationships(Author, 2010).

### Client

The necessity for an architectural intervention that accommodates a diverse mixture of activities that is not detached from everyday life is evident. As a result of the hybrid nature of such a project, the client for the project will be the city of Pretoria and a number of different stakeholders. The stakeholders will have different levels and types of investment and interest in the new project while the city of Pretoria's interest will be that of investing into a project that could provide the city with better legibility and which would start revitalising the Nelson Mandela Corridor. The different stakeholders will be the general public.

### Precedent: Möbius House

Location: Het Gooi, Netherlands (1993 -1996)

Architect: UNStudio

Program: Live, Work, Sleep, Play

Concept:

The organizational and formal structure of the Möbius house is based on a double-locked torus, the Möbius strip. The intertwining trajectory of the strip relates to the 24-hour living and working cycle of a family, where individual working spaces and bedrooms are aligned but collective areas are situated at the crossing points of the paths. In a similar manner these unfolding lines are materialized with glass and concrete, swapping the conventional use of these materials (UNstudio 2010).

The Möbius loop integrates programme, circulation and structure seamlessly. The house interweaves the various different activities – work, live, play - into one structure. Movement through the Möbius loop follows the pattern of an active day.

Figure 5.42. (right) Möbius strip (UNStudio, 2010)

Figure 5.43. (bottom) Exterior view (UNStudio, 2010).



### DESIGN CONSIDERATION

This precedent illustrates the manner in which the hybrid nature of a home and the interaction of all its different functions/activities are represented both physically and spatially.



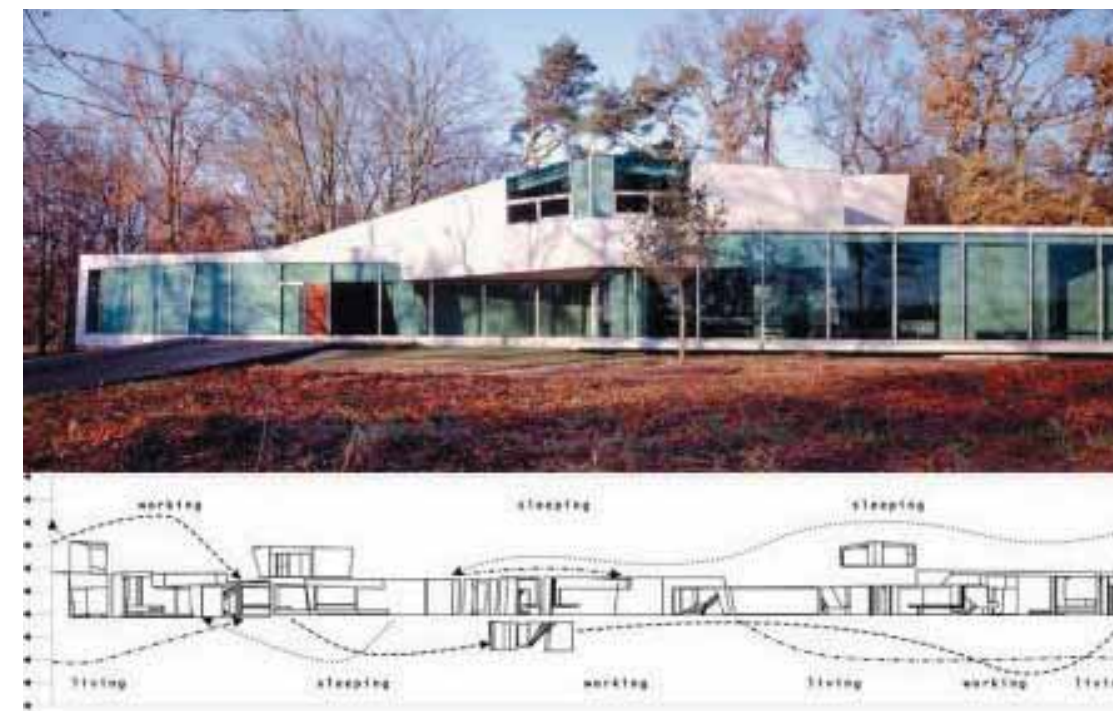
interaction of different spaces/activities by swapping the conventional use of materials (UNStudio, 2010).



Figure 5.45. Interaction of different spaces/activities by swapping the conventional use of materials (UNStudio, 2010).



Figure 5.46. (below) The interweaving trajectory of the Möbius strip relating to the 24-hour living and working cycle of a family (UNStudio, 2010).



### Precedent: Yokohama International Port Terminal

Location: Yokohama, Japan

Architect: Foreign Office Architects

Program: Transportation hub: Shops, restaurants, multiple traffic facilities.

Concept:

The Yokohama International Port Terminal is a new type of transportation space integrated with urban facilities. The building was conceived as an extension of the pier ground rather than the building being an object that would sit on the pier, detached from its context. The building accommodates the terminals, and creates a large urban park on the roof of the terminal. The building is designed as an extension of the urban ground.

To ensure maximum urban life throughout the terminal, the building is organised around a circulation system which challenges both the linear characteristic of piers and the direction of circulation. Rather than the conventional gateway flows of fixed orientation, the terminal uses a series of programmatically-specific interlocking circulation loops designed to produce an uninterrupted and multi-directional space linking the upper landscape with that of the lower decks. The tectonic system of the folded surface maximises the terminal's flexibility – both hybridising the circulation, program and structural system and exploiting their differences to produce spatial variety (FOA, 2010).

As the terminal maintains a low profile and is an extension of the ground behind it, the terminal does not become an isolated object on the water. It demonstrates the successful stitching of the urban park with that of the lower levels of the terminal and the existing pier.

Figure 5.47. (below)  
The terminal as an extension of the urban ground (FOA, 2010).

Figure 5.48. (bottom left)  
Interior view (FOA, 2010).

Figure 5.49. (bottom right)  
Exterior view (FOA, 2010).



Figure 5.50.  
Exterior view (FOA, 2010).



Figure 5.51.  
The urban park on the roof of the terminal (FOA, 2010).



Figure 5.52.  
The folded surface maximising the terminal's flexibility (FOA, 2010).



## Proposal

From the analysis of the existing tensions that exist within the city of Pretoria, it can be deduced that cities, much like that of Pretoria, operate and evolve over time according to multiple, overlapping, simultaneous and often disproportionate logics that interact in unpredictable ways. The conflicting spatial practices ensure that city building always amounts to a provisional exercise, a permanently unsettled condition that Jane Jacobs (1961) identified as “organized complexity” (Murray 2008: 9).

Henri Lefebvre (1991: 14-18, 38-41) describes social space as not being an inert void within which social action takes place. It is rather a powerful and creative force in its own right. Viewing the city of Pretoria within this spatial perspective allows its urban landscape to be viewed as an evolving field of tensions and contradictions, in which the physical features of the cityscape are saturated with symbolism and meaning and where collective memories and imagined futures are inscribed in the built environment (Murray 2008: 6).

When dealing with the production of space within an urban landscape that is in constant field of evolving tensions, it must be acknowledged that the evolving urban form of cities always involves protracted struggles between contending forces, where the terrain for battle oscillates between mobile “wars of manoeuvre” and static “wars of position” (Murray 2008: 6). In terms of everyday life, the cityscape is a contested terrain of both social discipline and resistance. Ordinary residents who live and work in the city are not just passive recipients of grandiose municipal planning schemes but active agents in carving out places for themselves in the interstices of urban space. Cities function as administrative hubs from which order, control and hierarchy originate but also function as places where these stabilizing forces are challenged and disrupted (Solnit and Schwartzberg 2000: 18-19).

The realm of architecture is seen as being of apparent stability. The traditional role of architecture has been one of reassuring the public that things are under control. The unity and symmetry of monumental architecture refers symbolically to a harmonious and balanced universe, in which contending forces are reconciled. Instead, Lebbeus Woods (Woods 2009) describes architecture as being ‘in tension’, one of restrained force or of forces held in equilibrium. If architecture is thought of as being ‘at rest’ a position of stability and predictability is adopted.

A system of knowledge that privileges these qualities are constructed that underpins one's actions and dictates their goals (Woods 2009). This is the case with planning professionals who ignore the contested nature of the urban landscape. As a result the current trend of reducing architecture to scenography allows free-standing non-contextual objects to be built that create new boundaries, enclosures and mono-functional identities within Pretoria's urban landscape.

Architecture in tension suggests a struggling architecture, and humanity with limited control of nature, and of itself. The forces in such architecture are activated, not pacified. Woods (Woods 2009) regards these forces as straining against the materials holding them. Change is inevitable, as the materials age or tire, or as they are affected by disturbances within or around them. The forces are, in effect, at war with the materials; they want to overcome them; they want to be free of materiality, to flow into the world's vast oceans of energy, from which they will be reborn again and again, in countless cycles of transformation. Understanding architecture in such a manner affects the outlook on architecture and leads to the construction of a knowledge-system based on concepts and processes of transformation (Woods 2009).

The idea of transformation within a spatial field of tension is to understand the inter-dependence of the elements in the field and more importantly their inter-connectedness. The city performs as a space for the contested urban landscape. The inter-connectedness of the city acting as a whole comes with a price as each person within this spatial field of tension will feel the increase in tension produced by others. Uncertainty of where the next pressure point will increase the tension in the system (Woods 2009). This notion that architecture and the city are in a permanently unsettled condition are strengthened by Jane Jacobs (1961) and her idea of the city being in a state of “organized complexity”.

As a result of the ever-changing nature of the city of Pretoria the last two decades have seen the closure of major upscale service oriented businesses and the decline of middle-class retail shopping and leisure venues. These changes have gone hand in hand with the changing nature of socio-economic activities in the inner city, the shifting social composition of urban residents, and a dramatic transformation in the functional uses to which

city buildings, open places, and streets are put. To a certain extent, the physical decay of the inner city has been brought about by the inability of the built environment to accommodate the changing functions and uses of city space (Murray 2008: 70).

### Objective

The aim of the architectural intervention is to try and understand the spatial and functional opportunities presented by city and its tensions. The built environment has failed to accommodate changing functions and new uses of city space as a result of the city centre not being able to adapt to the changing nature of the spatial field of tensions. The new architectural intervention will be informed by the analysis of the existing tensions within the city of Pretoria. Thereafter, the changing functions and new uses of space that exist within the city will be identified. Future trends will also be identified. Having such informants as the basis for the design of a mixed-use development will provide the necessary tools in being able to accommodate the diversity of functions and facilities in order to better serve an urban society in flux.

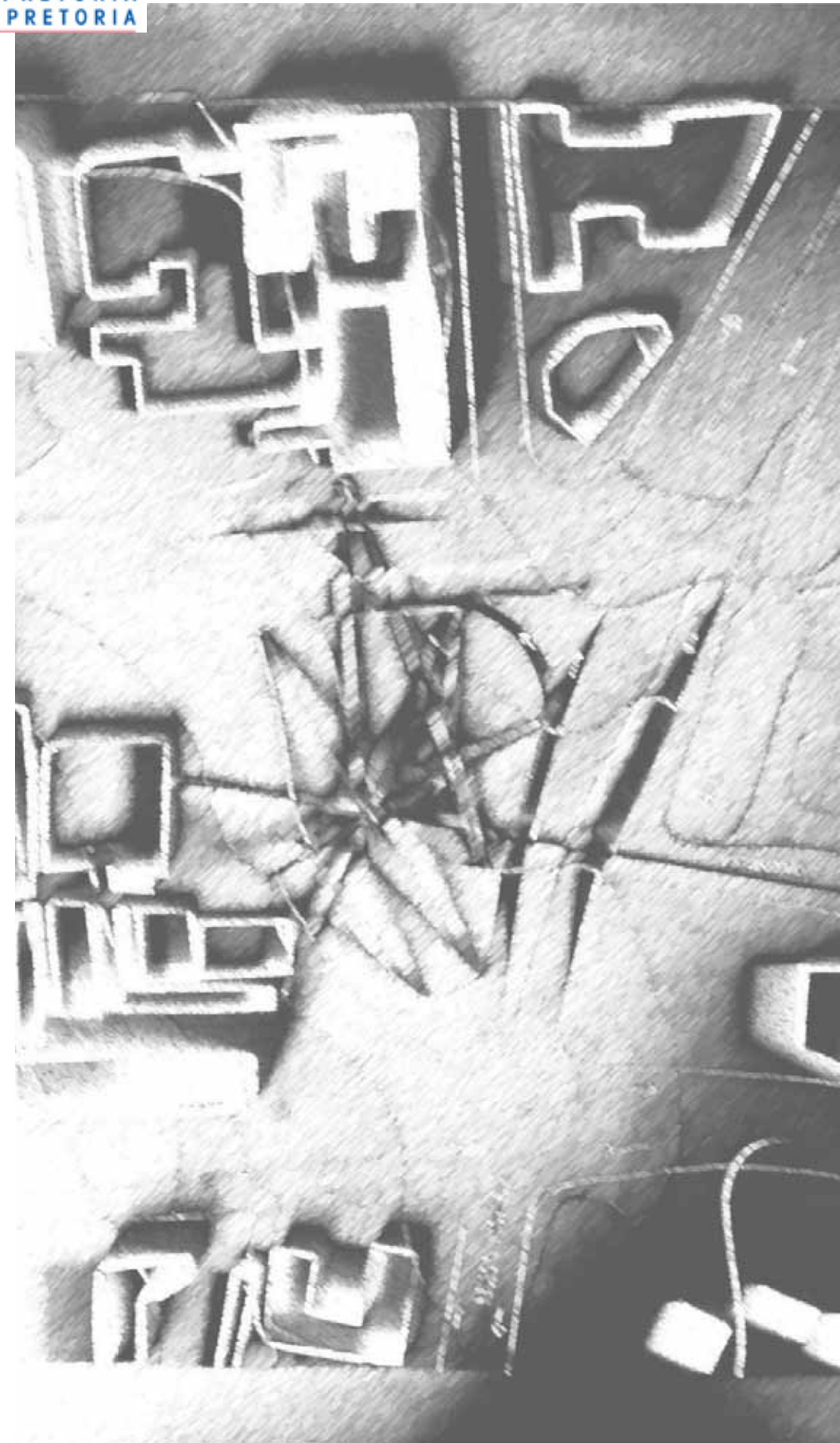


Figure 5.53.  
The urban island within a spatial field of tension  
(Author, 2010)