



- 01– SITE SELECTION
- 02– MACRO SCALE CITY ANALYSIS
- 03– FRAMEWORK
- 04– HISTORICAL CONTEXT
- 05– LEWIS & MARKS BUILDING
- 06– EXISTING CONTEXT: Sammy Marks Development
- 07– PHYSICAL + LEGAL CONTEXT

CONTEXT + URBAN ANALYSIS



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UNIVERSITY OF PRETORIA
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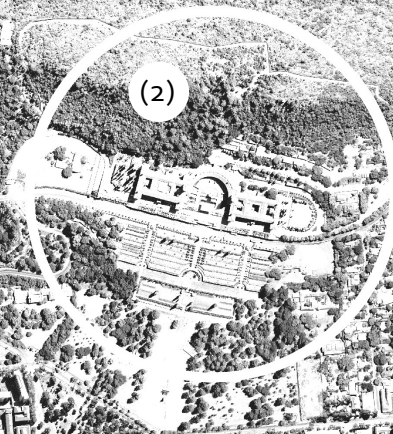


Illus 4.1 Aerial photo of Pretoria City Centre

100 500 1000 m



Chapter 04



01- SITE SELECTION

1.1 Macro-scale

There are three possible strategies with regards to site selection on a city-wide scale: (*Illus 4.1*)

- (1) Placed near a major transport node as high densities of people are found in those areas for short periods of time.
- (2) Alternatively, the site can be in the vicinity of the Union Buildings next to the seat of South African government
- (3) Or, situated centrally

To situate the site centrally is ideal because it will allow access to a larger spectrum of users.

1.2 Micro-scale

To best serve the citizens, a location of convenience should be established. It needs to cater to all modes of transport (pedestrian movement, public transport and private vehicle) and be situated among a diverse spectrum of commercial activities and offices (*Illus 4.3, 4.4, 4.5, 4.6*). The objective for Citizen Connect is for it to be responsive to its context, as it is not intended to be a destination but rather a parasitic facility that feeds off and reacts to the environment.

1.3 User

Another consideration, before site selection can take place, is the user of the Pretoria City Centre needs to be defined as these are the people Citizen Connect will serve. Three users of the Pretoria City Centre were defined: a regular user, a transit user and a periodic user.

Regular User:

The regular user is a citizen that either works, studies or lives in the city centre.

Transit user:

The transit user uses one of the main transport nodes: Belle Ombre train station in Marabastad, Pretoria train station or the Gautrain to the south. In close vicinity to the train station nodes are taxi ranks and bus depots. In addition, the private vehicle owner passes through the city to a destination north, south, east or west. For these citizens, Pretoria City centre serves as a transit hub. (*Illus 6.10.*)

Periodic user:

This user is one that goes to Pretoria to for a specific function. Either as a place of entertainment has to visit a specific government department or goes to the city in search of a place to work. The periodic user can also be termed as an unfamiliar user and will use landmarks to navigate through the city.



1.4 Client

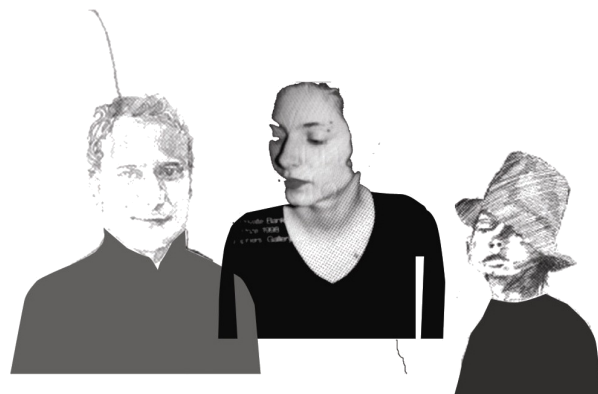
There are constant debates in South Africa as to whether municipal services should be privatised or continue to be provided by government. Those in favour of privatisation argue that privatising services render them more efficient and therefore more affordable. Opponents argue that this approach does not serve the large poor population because services will in turn be too expensive and a subsidy will have to be paid by government (Zybrands, 2006:158).

What the author proposes is to implement a Public Private Partnership (PPP), where both public and private bodies can work together for the benefit of the citizen.

In South African law, a PPP is defined as (Gqoli, 2005:02):

- * A contract between government institution and private party
- * Private party performs an institutional function and/or uses state property in terms of output specifications
- * Substantial project risk (financial, technical and operational) transferred to the private party
- * Private party benefits through unitary payments from government budget and/or user fees

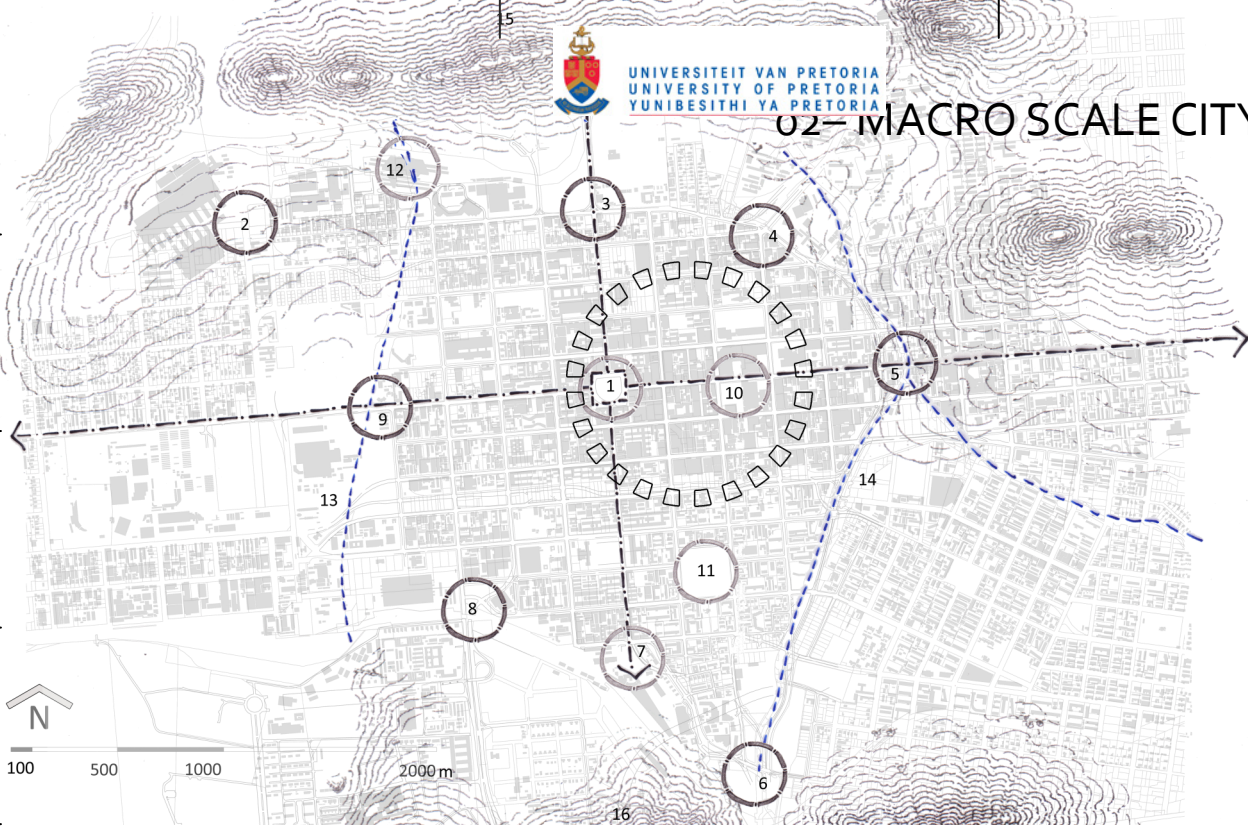
In August 2004, Trevor Manuel, the minister of finance, provided the following statement on PPPs: *The public gets better, more cost-effective services; the private sector gets new business opportunities. Both are in the interests of the nation.* (Gqol, 2005:02)



Illus. 4.2. Graphic representation of citizens of Pretoria



02 - MACRO SCALE CITY ANALYSIS



Illus 4.3

2.1. BOUNDARIES & NODES:

- | | | | | |
|-------------------------|----------------------------|-------------------------|-----------------------|--------------------|
| 1. Church Square | 2. D.F. Malan Road gateway | 3. Northern gateway | 4. Taxi station | 5. Eastern gateway |
| 6. Southern gateway | 7. Pretoria Station | 8. Ben Shoeman gateway | 9. Western gateway | |
| 10. Lilian Ngoyi Square | 11. Burgers Park | 12. Belle Ombra station | 13. Steenhoven Spruit | |
| 14. Apies River | 15. Witwatersberg | 16. Salvokop | | |



Illus 4.4

2.2. MAJOR ROUTES



Illus 4.5

2.3. GOVERNMENT OCCUPIED / OWNED BUILDINGS & LANDMARKS

- 1. Church Square 2. Absa building 3. Reserve Bank 4. Witwatersberg 5. Steenhoven Spruit
- 6. Marabastad 7. Salvokop 8. Meintjieskop 9. Union Buildings 10. Town Hall
- 11. Pretoria train station & Gautrain station 12. Apies River 13. Lion Bridge 14. Zoo



Illus 4.6

2.4. PRIMARY, SECONDARY AND PEDESTRIAN MOVEMENT PATTERN



1. CHURCH SQUARE

3. STANDARD BANK BUILDING

6. SAMMY MARKS DEVELOPMENT

4. LILIAN NGOYI SQUARE

7. MUNITORTA

Bus + taxi stop

Bus + taxi stop

15. PEDESTRIANISED CHURCH STREET

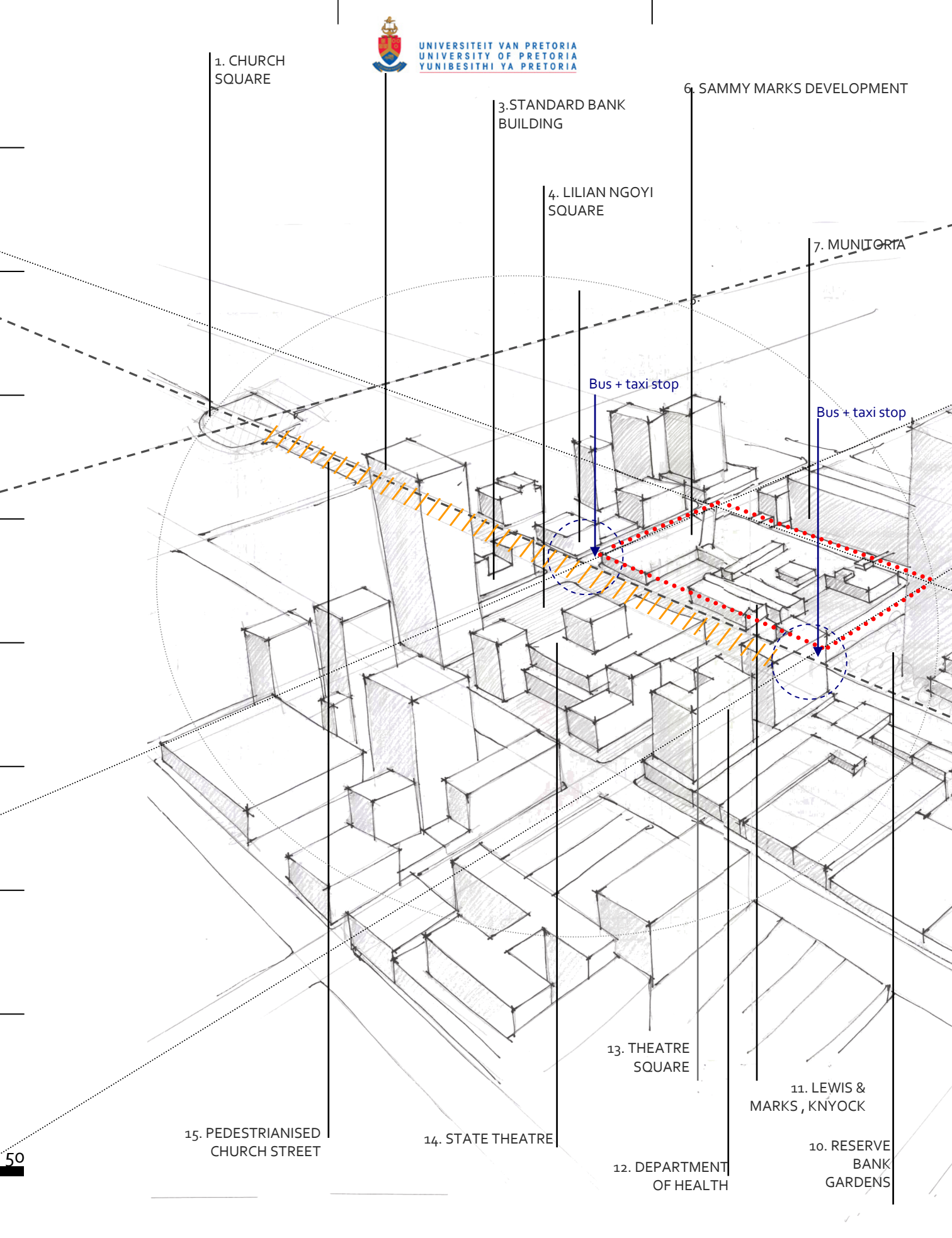
14. STATE THEATRE

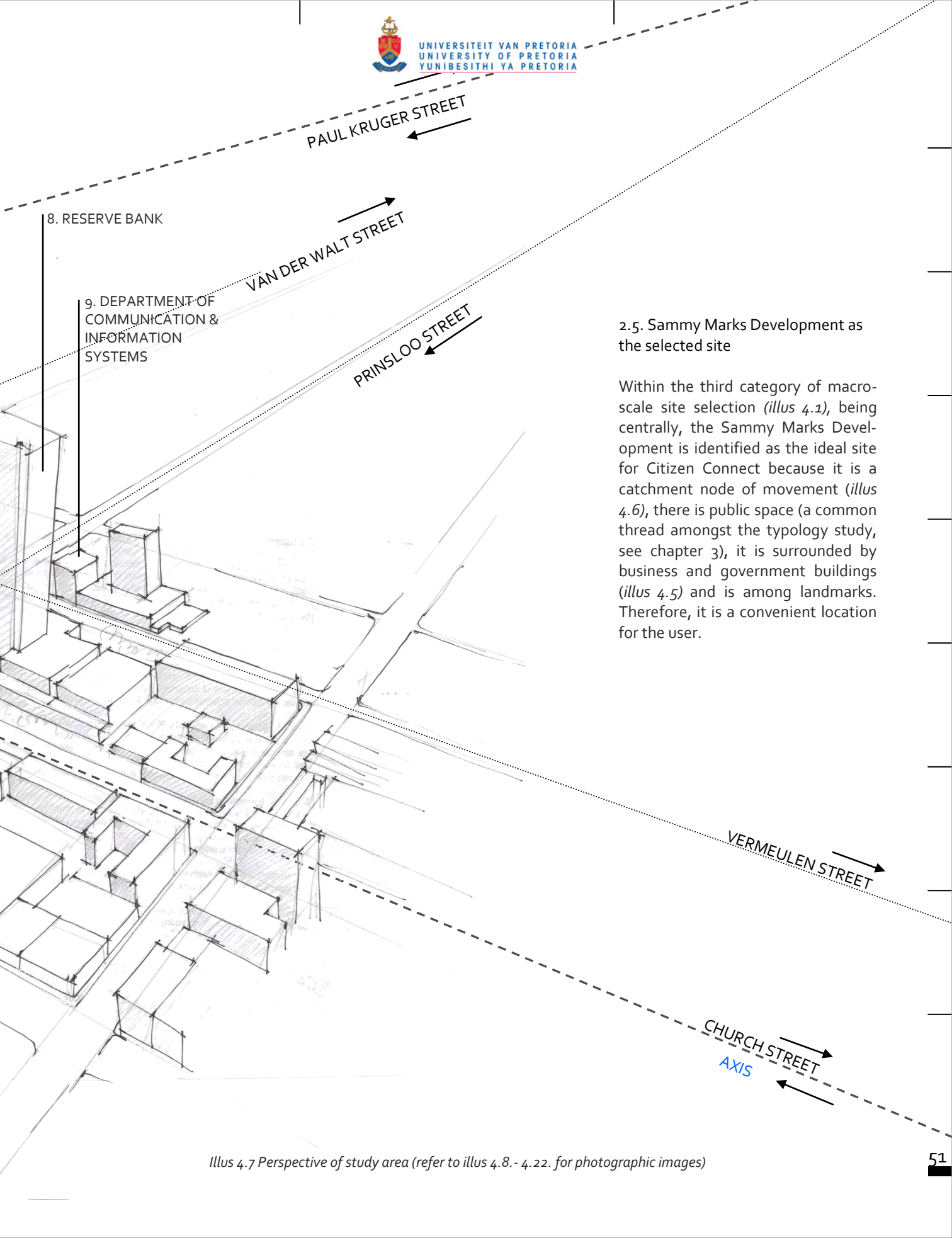
13. THEATRE SQUARE

11. LEWIS & MARKS, KNYOCK

12. DEPARTMENT OF HEALTH

10. RESERVE BANK GARDENS





PAUL KRUGER STREET

8. RESERVE BANK

9. DEPARTMENT OF
COMMUNICATION &
INFORMATION
SYSTEMS

VAN DER WALT STREET

PRINSLOO STREET

2.5. Sammy Marks Development as the selected site

Within the third category of macro-scale site selection (*illus 4.1*), being centrally, the Sammy Marks Development is identified as the ideal site for Citizen Connect because it is a catchment node of movement (*illus 4.6*), there is public space (a common thread amongst the typology study, see chapter 3), it is surrounded by business and government buildings (*illus 4.5*) and is among landmarks. Therefore, it is a convenient location for the user.

VERMEULEN STREET

CHURCH STREET
AXIS

Illus 4.7 Perspective of study area (refer to illus 4.8 - 4.22. for photographic images)



1. CHURCH SQUARE (illus 4.8) | 2. ABSA BUILDING (illus 4.9) | 3. STANDARD BANK BUILDING (illus 4.10)
4. LILIAN NGOYI SQUARE (illus 4.11) | 5. SHOPRITE BUILDING (illus 4.12) | 6. SAMMY MARKS DEVELOPMENT (illus 4.13)



7



8



9



10



11



12

7. MUNITORIA (illus 4.14) | 8. RESERVE BANK (illus 4.15) | 9. DEPARTMENT OF COMMUNICATION & INFORMATION SYSTEMS (illus 4.16) | 10. RESERVE BANK GARDENS (illus 4.17) | 11. LEWIS & MARKS BUILDING AND KYNOCK BUILDING (illus 4.18) | 12. DEPARTMENT OF HEALTH (illus 4.19)



13. THEATRE SQUARE (illus 4.20) | 14. STATE THEATRE (illus 4.21)
15. PEDESTRIANISED CHURCH STREET (illus 4.22)

03— FRAMEWORK

Reactive Framework for Urban Quality as *Cities for people*
Pretoria City Centre east: Sammy Marks Precinct:

The Sammy Marks precinct is located east of Church Square in the Pretoria City centre. The precinct is a catchment node of movement, public space, business and government. The framework adds a reactive layer with emphasis on creating cities for people.

Manifesto:

_EXISTING CITY as the **CANVAS** for **REACTIVE** design solutions

_REACTIVE LAYER on the **CITY**

_CONSISTENCY in the **DETAIL** at **MULTIPLE SCALES**

_Not IMPOSING ideology, **PROPOSING** new possibilities and **ENHANCING** existing qualities

The cityscape can be divided into three dimensions: the human dimension, the vehicular dimension and the architectural/edge dimension. Within the public domain the predominant investment in city spaces has gone into streets for vehicles, because of the increase in traffic. Several architectural interventions have focused on the individual building rather than the integration of the building within the public space resulting in a dismissive and introverted character.

Extensive research has been conducted by urban designers on successful cities. The layout of cities (both historical and current) shows that urban structures and planning influence human behaviour as well as the ways in which cities operate. This predominantly focuses vehicle vs pedestrian dominance (*illus 4.24*).

Within the context of Pretoria City Centre, the framework responds to the historical planning of the city. The city blocks are currently vehicle-orientated (*illus 4.24 column 4*); therefore the framework aims to create an inter-block system of arcades and links the areas where the human dimension gains priority (*illus 4.24 column 5*).

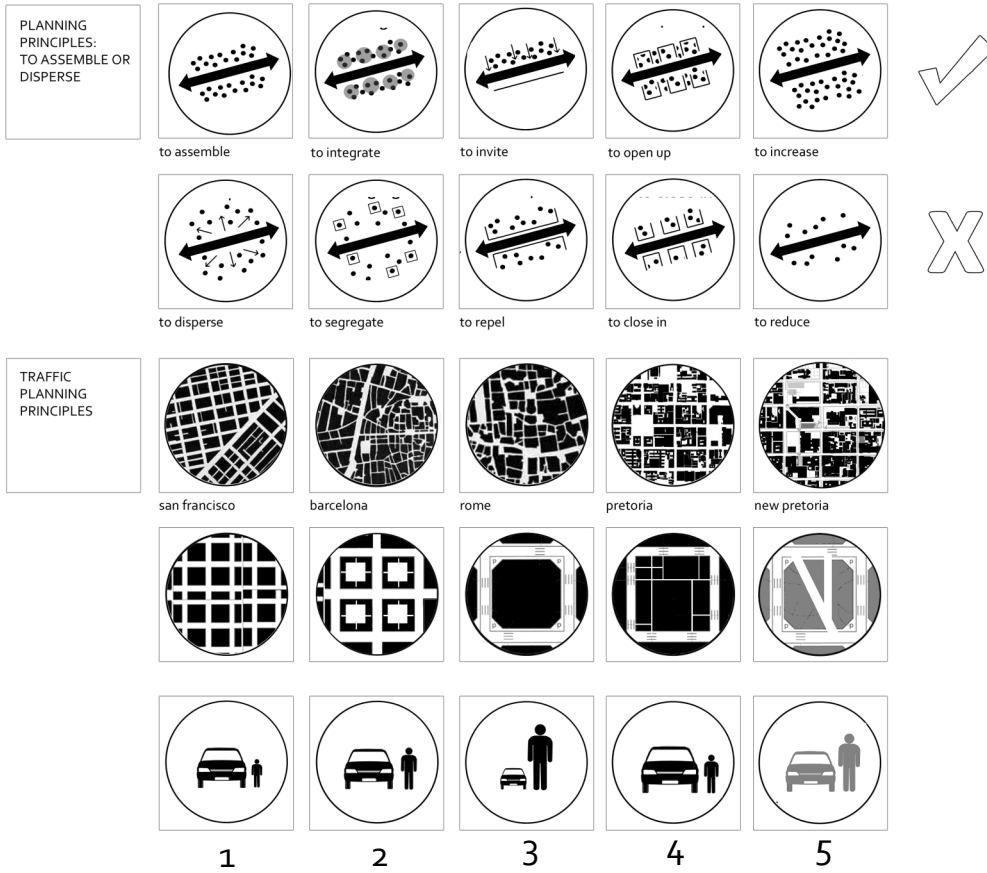
Places in the city such as parks, streets, sidewalks and squares are where people interact: human activities take place; they provide places to relax or exchange ideas. The traditional function of city space as the meeting place and social forum of city dwellers has been reduced, disregarded or ignored.

On an architectural / edge dimension (*illus 4.25*) allowance needs to be made permeability on ground level as well as transparency, allowing for the interaction between the user and the buildings.

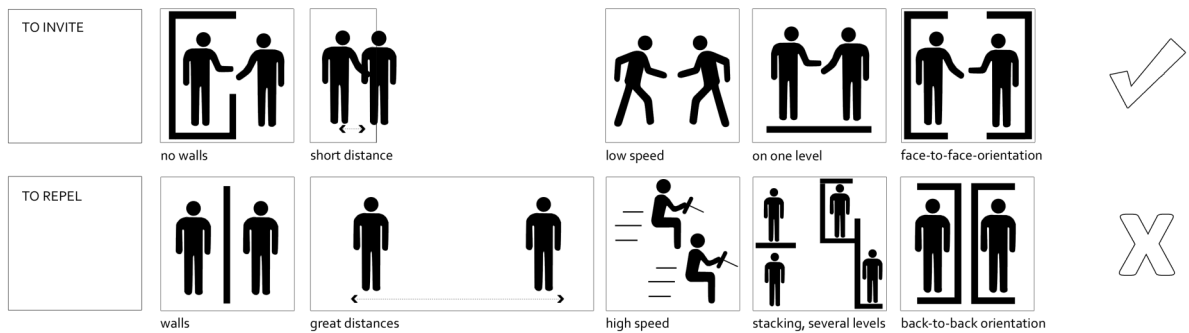
The quality criteria that are to be implemented on both a framework and architectural scale are urban comfort, urban opportunity and urban experience (*illus 4.26*).

The development plan (*illus 4.27*) shows the implementation of the framework and the response to the context by creating a network of positive public space. Inter-block movement is promoted and creates links between the public spaces and the proposed urban interventions. Thus the framework strengthens the existing urban fabric without imposing on it.

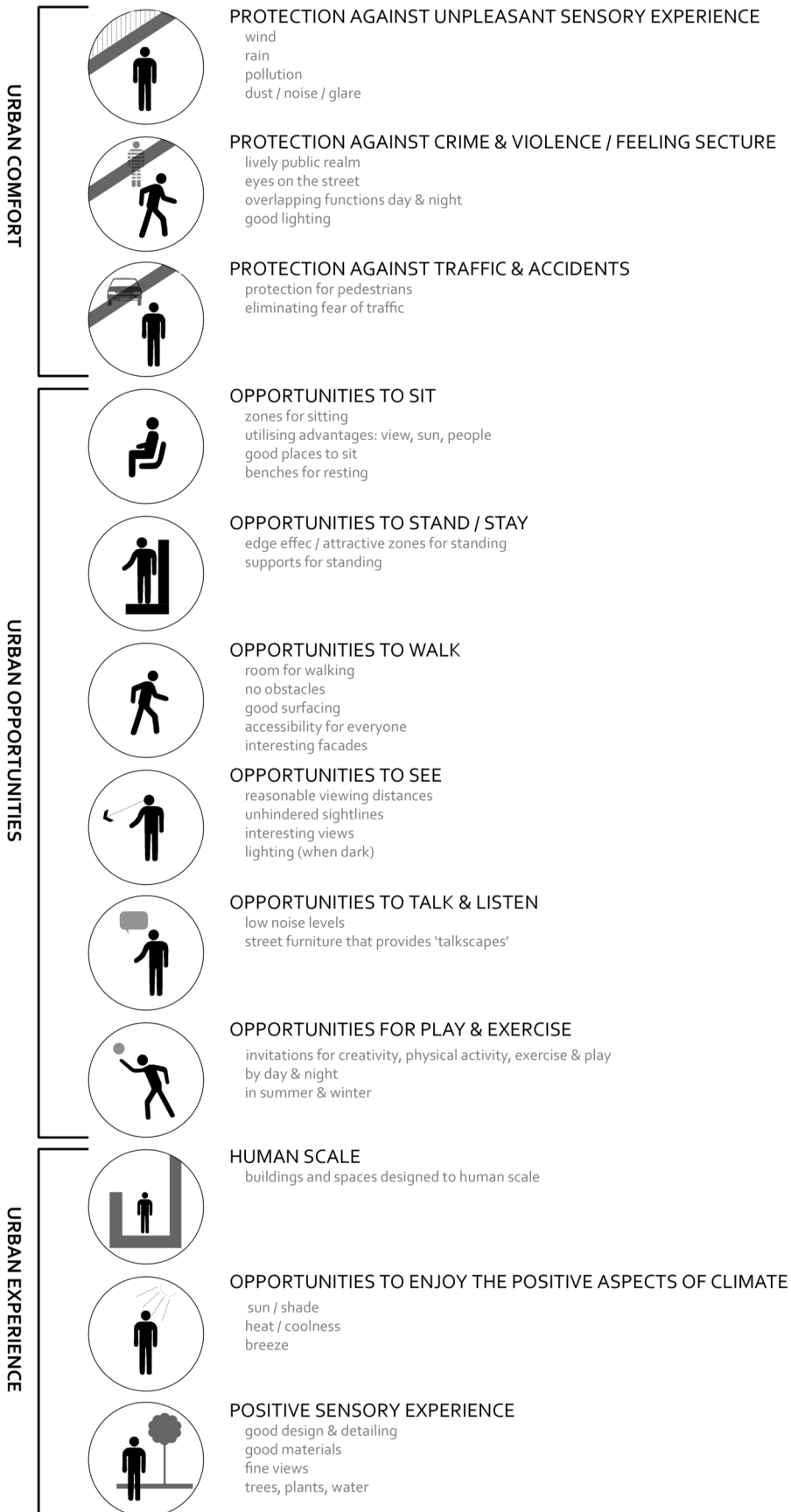




Illus 4.24 Planning principles: to assemble or disperse + traffic planning principles

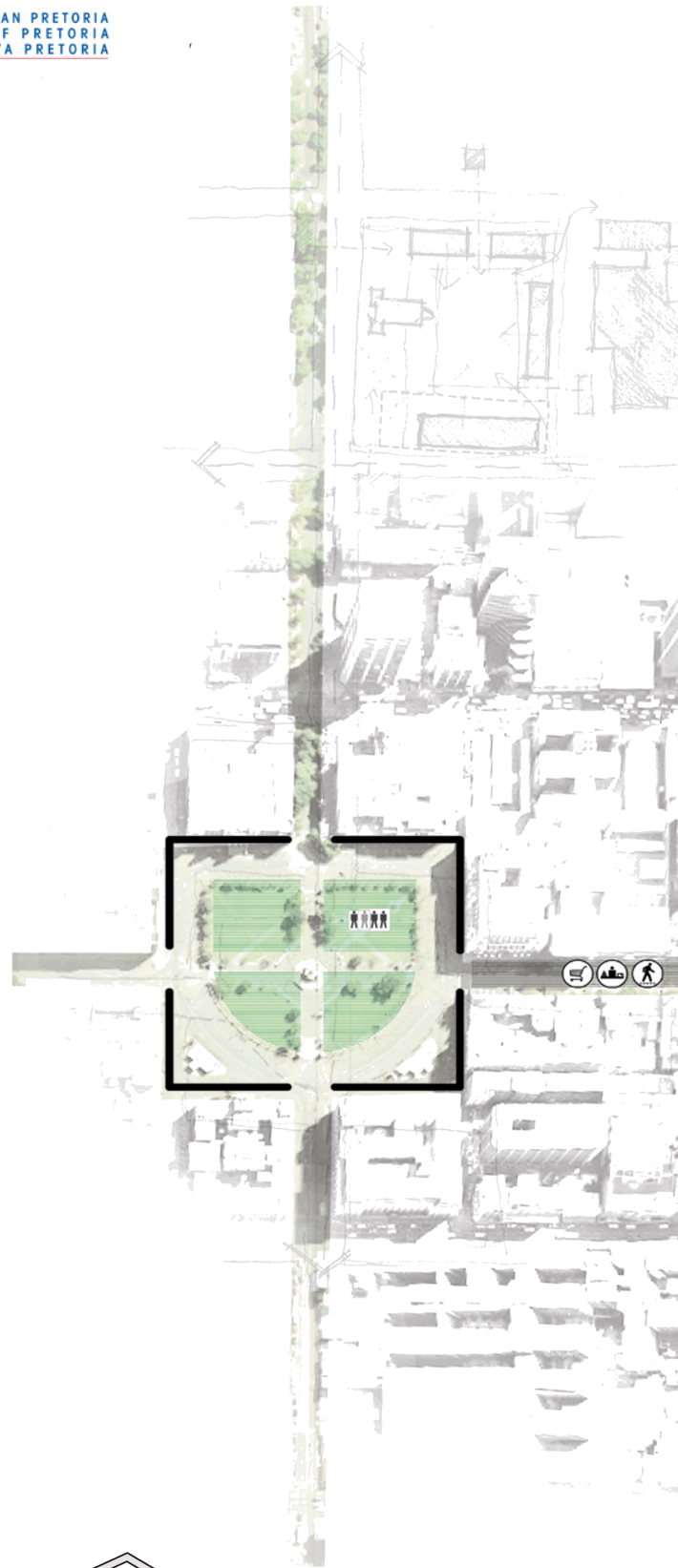


Illus 4.25 Planning principles: to invite or repel

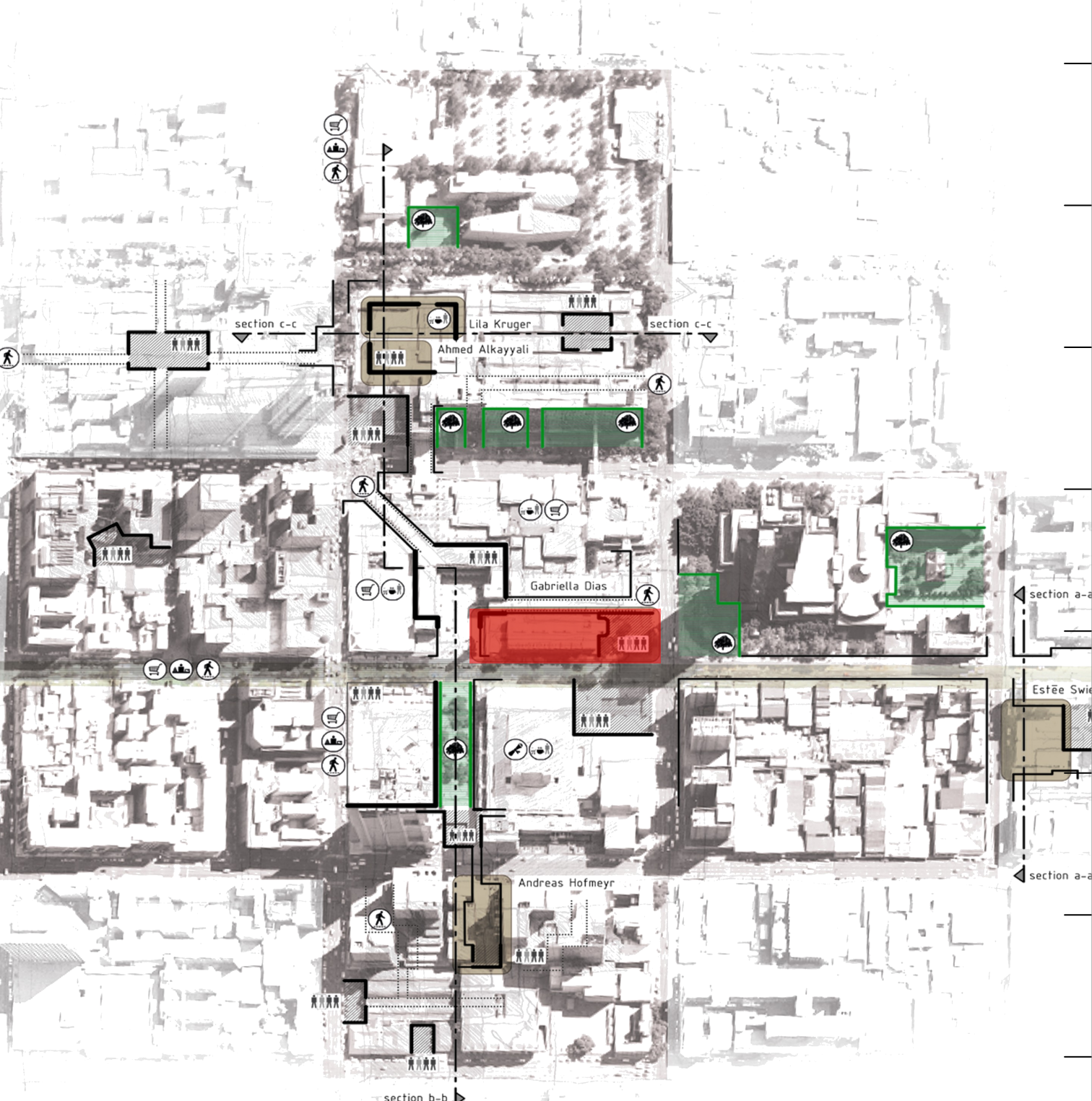




- main squares 
- secondary squares 
- green spaces 
- connection route between objects 
- arcade system 
- boulevard 
- proposed sites 
- housing and residential units 
- commercial and institutional units 
- retail and shopping opportunities 
- cultural and religious spaces 
- entertainment spaces 
- informal trading stalls 
- private vehicle parking 
- pedestrian activity and arcades 
- seating spaces 
- shaded green spaces 
- waiting spaces 
- public space and squares 



100



500m

Illus 4.27 Development plan



Commercial block

Market block

Lewis & Marks building



04- HISTORICAL CONTEXT

Church Square is the historic centre of the city of Pretoria. There was much activity that took place in the square, including a market. In 1894 the market moved from Church Square to a larger site to the east, which is the block on which the present State Theatre stands. Due to the change in location of the market, development occurred along Church Street from Church Square to Market Square. During an economically prosperous time the Lewis & Marks building was erected in 1903 facing Market Square to the south (*Illus 4.29.*).

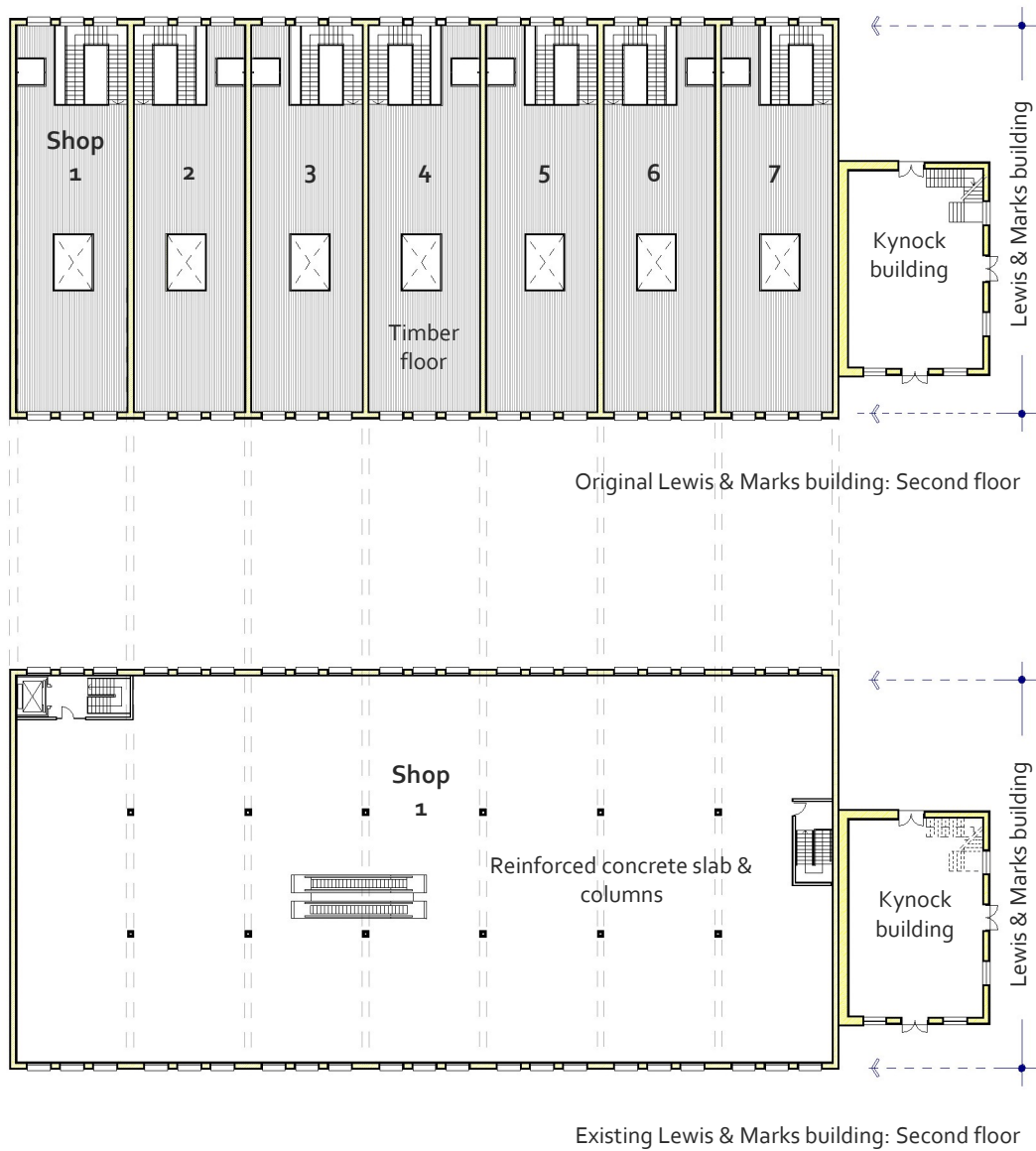
Market Square was demolished to make way for Strijdom Square and the State Theatre complex, completed in 1981. In 1975 the city council began with the planning of Verwoerd Square development, which was to occur north of the State Theatre, where the Lewis & Marks building stands. The original decision was to demolish the Lewis & Marks and Knyock building to make way for a square to the north of the State Theatre, which fell within the scheme of the development of three blocks: the State Theatre block, the Verwoerd Square block and the Munitoria block. The controversy round the preservation and significance of the buildings began.

The outcome of this controversy was that the Lewis & Marks building along with the Kynock building were declared buildings of heritage significance and restoration work was done in [1984]. The Sammy Marks development (previously known as Verwoerd Square development) was completed in 1992 and integrated the buildings within the design



Illus 4.28 Historical aerial photo, 1949

Illus 4.29 Historical photo of Market Square and Lewis & Marks building, 1900



Illus 4.30. Original and existing plan of the Lewis & Marks building

05– LEWIS & MARKS BUILDING

Original use: Retail

Current use: The proposal was to use the building for a public purpose, such as a museum, to tie in with the Sammy Marks development that was to take place.

Ground & First floor: retail

Second floor: offices (predominantly vacant)

Future use: Merge of retail and Citizen Connect functions

Historical name: Sammy Marks building

Current name: Lewis & Marks building

Architect: De Zwaan

Style: Dutch Renaissance

Date of completion: 1903

Monument: Provincial Grade II

Location: Pretoria City Centre

ERf: 1/3357 & 5/337

Address: Church Street east (between van der Walt and Prinsloo Street)

Owner: Municipality of Pretoria (address Munitoria)

Technical details of original building (approximate date of restoration 1984):

Roof material: Corrugated metal sheet with ventilator

Walls: Red brick in English bond with flat joints and sandstone, imported from Holland. Natural stone foundation walls used. Good workmanship

Floors: Timber floors internal. Mosaic pattern floor by the entrance

Ceiling: Press language pattern ceiling panel

Doors/windows: Timber framed

Internal finishes: Internal walls plastered

Other: Stair railings neatly carved Oregon pine

Accessories: Decorative cast iron gutters

Lifts: Timber frame construction with heavy cast iron wheels visibly hoisted with a rope cable

Windows: Shop windows bronze framed with inscription Stanley Jones & Co. Shop-fitters, King's Cross, London

Current conditions:

Roof material: Corrugated metal sheet with ventilators, good condition

Walls: Original external walls in a good condition

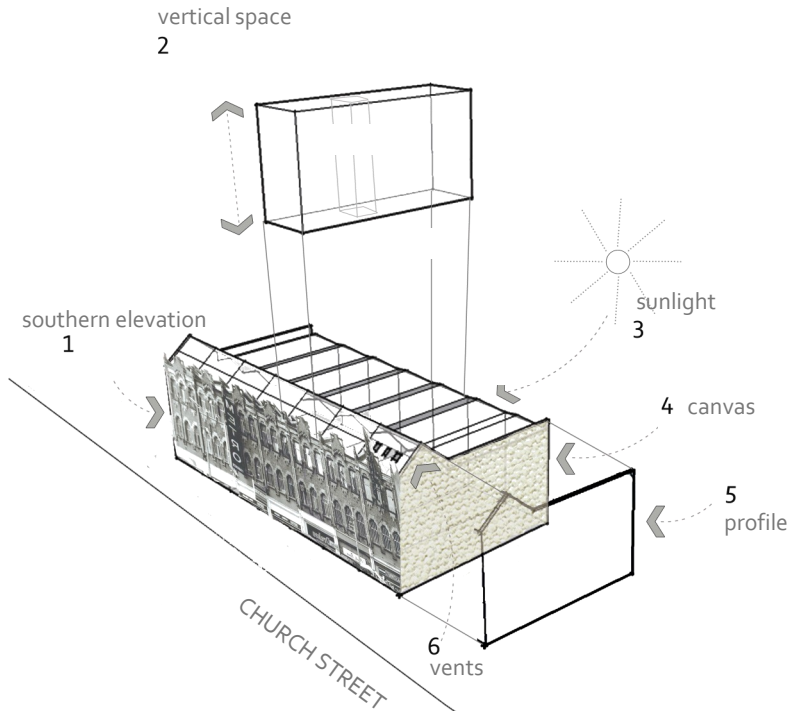
Internal structure: Original timber floors and internal walls, staircases and lifts in the individual seven shops have been removed and replaced with reinforced concrete slabs and columns. The current state of the building is that the internal walls, staircases, lifts, light wells and timber flooring was removed to now have a reinforced concrete slab and columns

Ceiling: Suspended ceiling

(Refer to Appendix 1 for plans and photos)



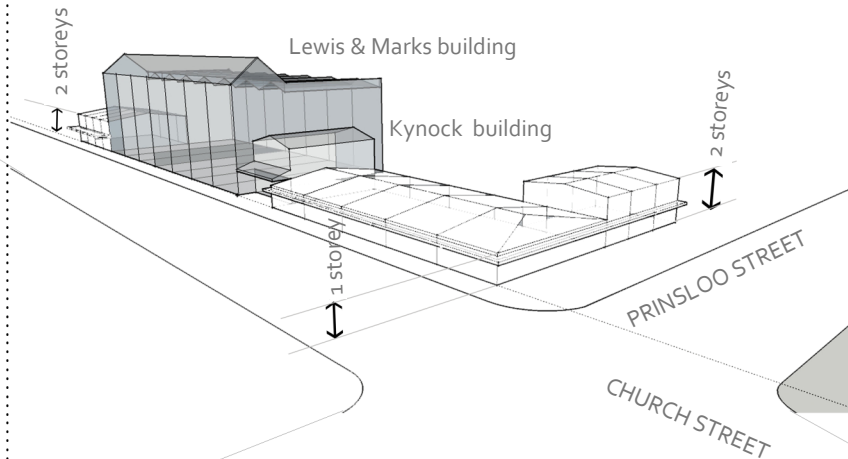
Illus 4.31. Historical context of Lewis & Marks building [1970]



Illus 4.33. Perspective indicating elements of the importance of the Lewis & Marks building



Illus 4.32. Historical photo of Lewis & Marks building [1980]



Illus 4.34. Perspective indicating the wire frame of historical context

Cultural significance:

1- Historical & Physical Context:

When the Lewis & Marks building was constructed it faced Market square, a prominent public space at the time. It had a strong visual significance within its context because it was the tallest and largest building in the vicinity. When the State Theatre was constructed on the original site of the Market Square, the context changed but the building still held a prominent position in a now urban setting. Sammy Marks was a well known industrialist and financier, and later a member of the first Union parliament. In 1869 he arrived in South Africa and soon started mining where he accumulated wealth. He was a good friend of Paul Kruger and had a lifelong partnership with his cousin Isaac Lewis, hence the official name of the Lewis & Marks building. In 1920 Sammy died and the building was left in his trust. According to his testament, the building was not to be sold or demolished for 99 years. In 1969 the building was expropriated from the trustees of the late Sammy Marks by the City Council in 1965, for a compensation of approximately R2 million.

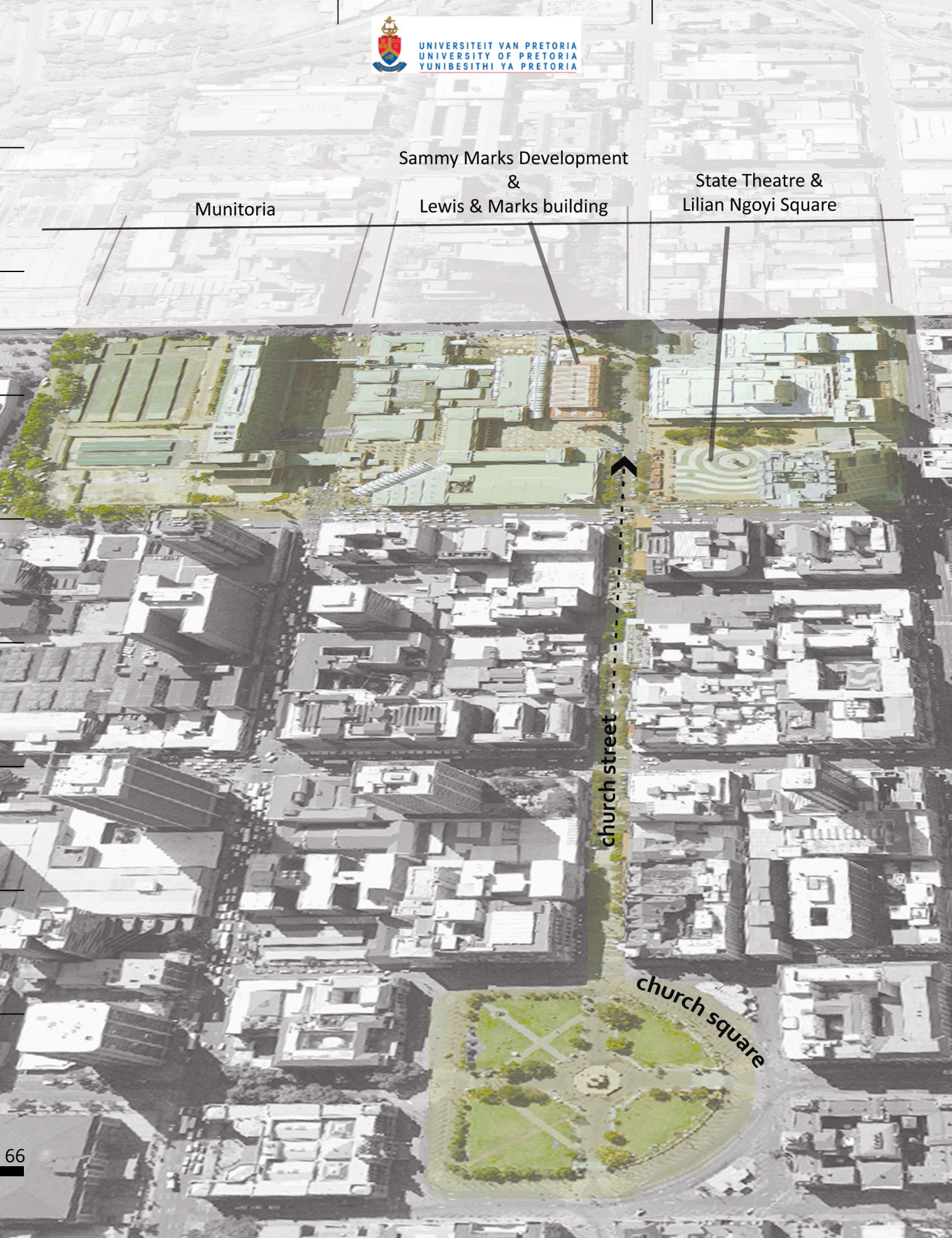
In 1975 the city council began with the planning of Verwoerdplein. The original decision was to demolish the Sammy Marks Building and the controversy over its preservation began. A meeting was held in 1981 at the University of Pretoria to discuss the possibility of declaring the building a national monument.

*Places of cultural significance enrich people's lives, often providing a deep inspirational sense of **connection** to community and landscape, to the past and to lived experiences. They are historical records, that are important as tangible expressions of ... identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us ..."*

The Burra Charter; 1999:1

2- Typology:

Being a retail building, the Lewis & Marks building was unique in its typology at the time. It is the only existing shop building in South Africa that consists of a row of identical small and high shops. A typical shop building would be built horizontally, perhaps with an attic on first floor level for storage, but not higher than that, and with an overhang on top of the sidewalk. The shop would traditionally have its broader side on the street edge. The shops of the Lewis & Marks building have a small front with a smaller fenestration and deep footprint. The small front and lack of overhang is typical of the Dutch architecture of that time. A lift installed in each shop makes storage on the second floor possible. Signage was not an integral part of the design, whereas other shop buildings would leave a bare space available on the building for that purpose. Advertisements were then placed between the windows and the sides of the building served as canvases for advertising.



Munitoria

Sammy Marks Development
&
Lewis & Marks building

State Theatre &
Lilian Ngoyi Square

church street

church square

o6– EXISTING CONTEXT: Sammy Marks Development

Architects: Studion3 Architects cc (City of Pretoria component)
Stauch Vorster Architects (Private sector component)

Year of completion: 1992

Owner: City of Pretoria

Project cost: R 220 million (1992)

Total development area: 115 500m²

The Sammy Marks Development was an initiative from the City Council of Pretoria as part of the redevelopment of the civic heart of the city. The development consists of a joint public and private development. The public development consists of mayoral facilities, conference centre, city library, city health department, city tourism department and office space to house other departments of the city. The private component consists of 24 350m² rentable space, a lettable cinema complex of 1520m², a lettable office component of 7790m², two open air squares of 2100m², 5 star hotel or an international standard (the assumption will be made that the hotel will be developed as it is an integral scheme that will contribute to the sustainability of the city), parking facilities for 1435 vehicles, two interconnecting bridges with Munitoria, restoration of the historical Lewis & Marks and Kynoch buildings.

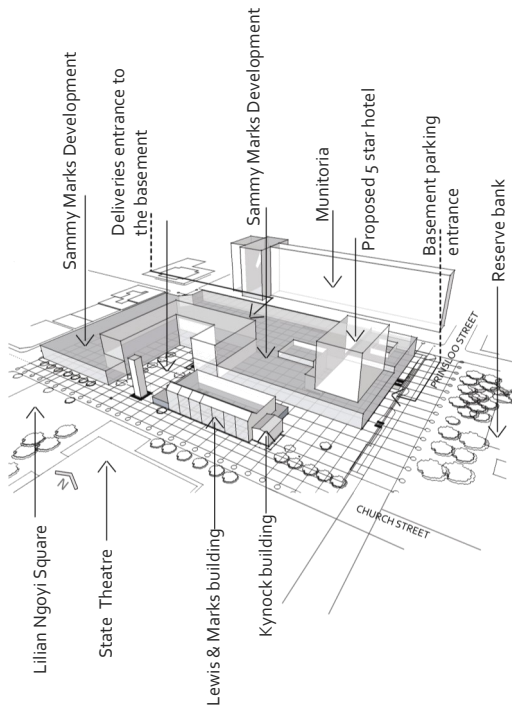
The Lewis & Marks building had a strong influence on the development, both in terms of language and scale. The use of the distinctive face brick throughout the new development as well as the customised precast concrete panels (lintels, windowsills, cornices) creates a sympathetic relationship the new and the old, which relates to *post modernism* and *contextualism*, architectural movements of the time. The design parameters that were established were durability, timelessness, consistency, sensitivity with respect to scale and the use of low maintenance materials. (Holden, 1993:125)

Additional characteristics of the development include a culture of bridges, roof gardens and public arcades that has been established.

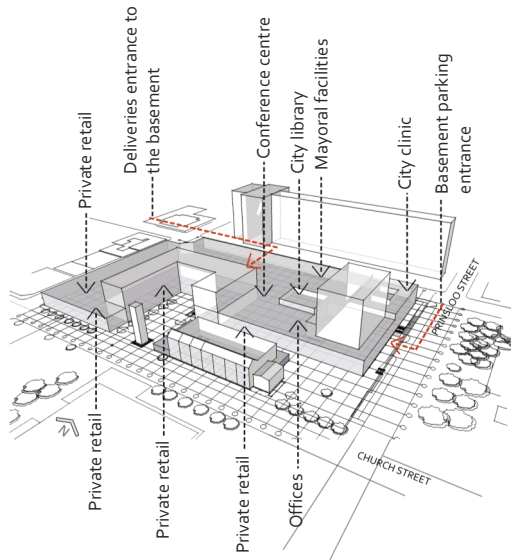
... this development represents a renewed awareness of the need to nurture urban development at a human, rather than monumental scale. This is in keeping with historic origins of Pretoria ... [which] ... must shed its image of 'kragdadigheid' and function effectively as a city, which serves people across the entire population spectrum.

(Adden, Planning:125)

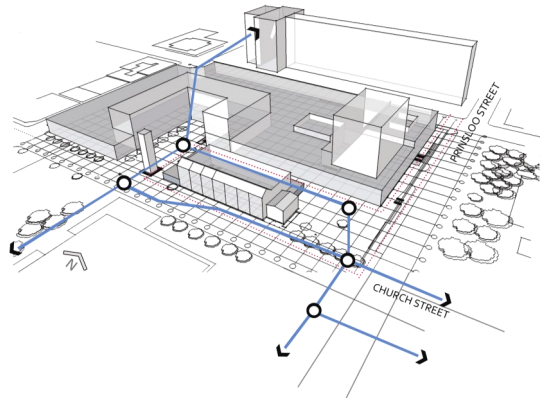
(Refer to Appendix 1 for plans)



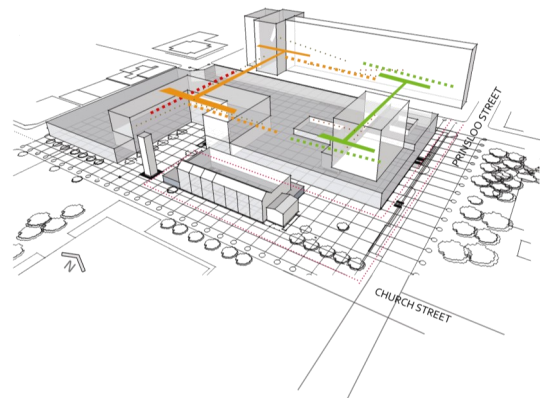
Illus 4.36. Existing context



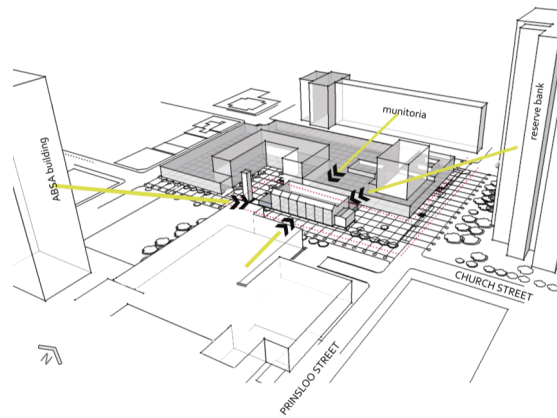
Illus 4.37. Existing functions of the Sammy Marks Development



Illus 4.38. Existing pattern of inter-block connection



Illus 4.39. Existing pattern of bridge cross-block connection



Illus 4.40. Existing views of the Lewis & Marks building in the urban setting

07– PHYSICAL + LEGAL CONTEXT

The climatic characteristics of Pretoria are warm to hot summers (15° - 30° day temperatures) with summer rains and thunderstorms and mild sunny winters (6° - 23° day temperatures) with cold evenings. Pretoria enjoys approximately 300 sunny days a year (Everitt, 2011).

The data below is included because Citizen Connect aims at integrating passive design strategies (see chapter 8). Passive design is achieved by responding to the local climate which can be used as a free renewable resource, therefore minimising mechanical heating, cooling and lighting. Wind is used for ventilation and cooling, sunlight is used for lighting and heating and shadows can be used for cooling, when taken into consideration whilst designing.

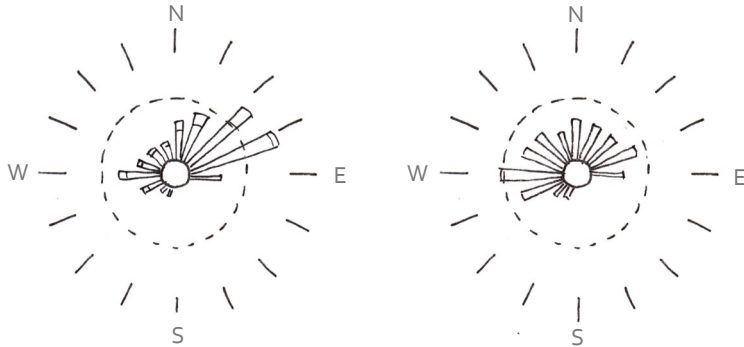
Wind

Windy months: August – October: northeasterly

Predominant summer wind direction: east-northeasterly

Predominant winter direction: southwesterly

Strong wind gusts: associated only with the passing of thunderstorms during summer



See chapter 8 for the ventilation strategy.

Illus 4.41. Wind rose for Pretoria City Centre

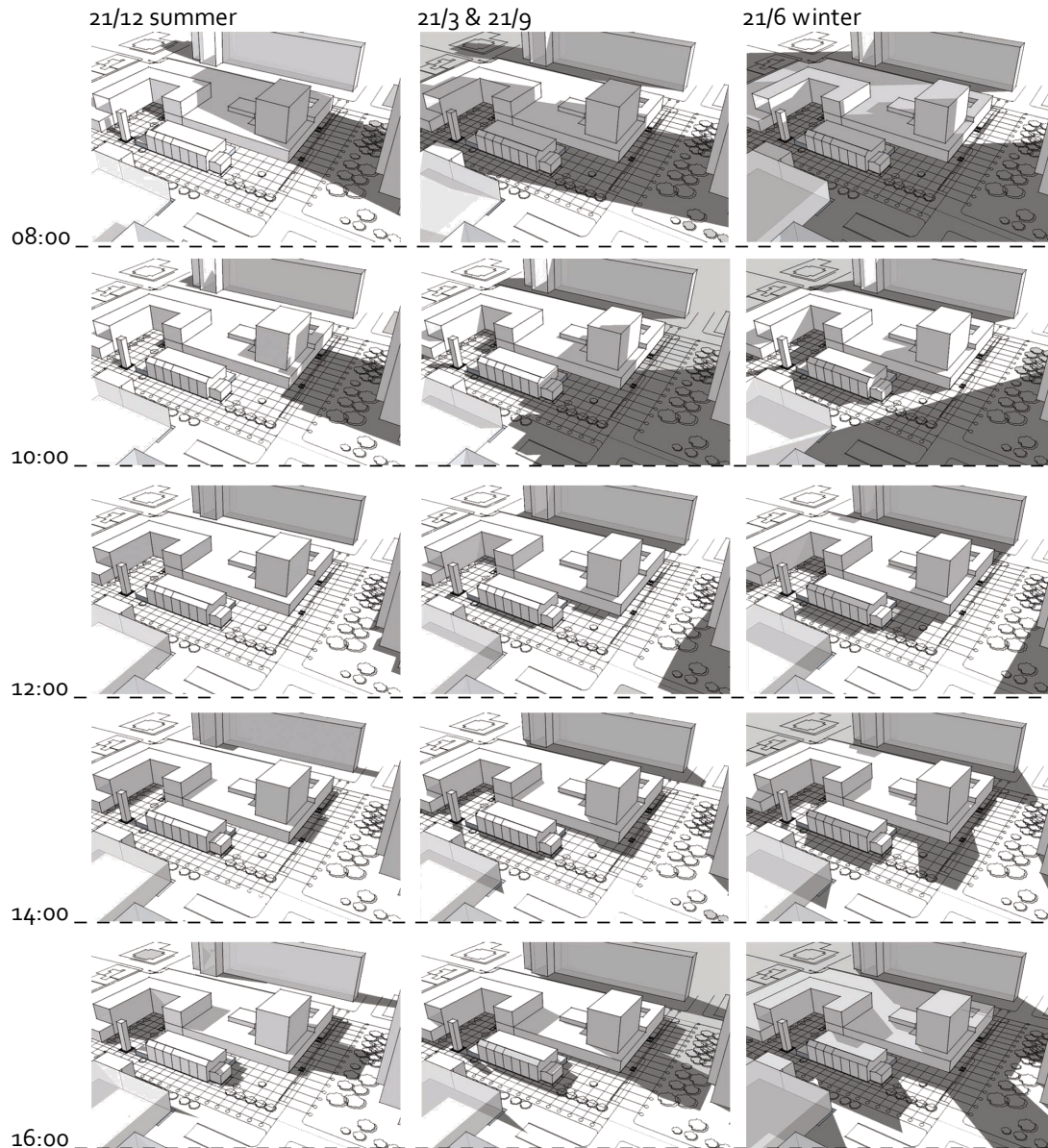
Temperature & rainfall

Month	Temperature		Rainfall	
	Average daily maximum	Average daily minimum	Average monthly rain (mm)	Average number of rain days
January	29	18	136	14
February	28	17	75	1
March	27	16	82	10
April	24	12	51	7
May	22	8	13	3
June	19	5	7	1
July	20	5	3	1
August	22	8	6	2
September	26	12	22	3
October	27	14	71	9
November	27	16	98	12
December	28	17	110	15
Year	25	12	674	87

See chapter 8 for the stormwater collection strategy + material selection

Table 4.1. Temperature & rainfall

Shadow study



Illus 4.42. Shadow study

See chapter 8 for solar design strategy + material selection

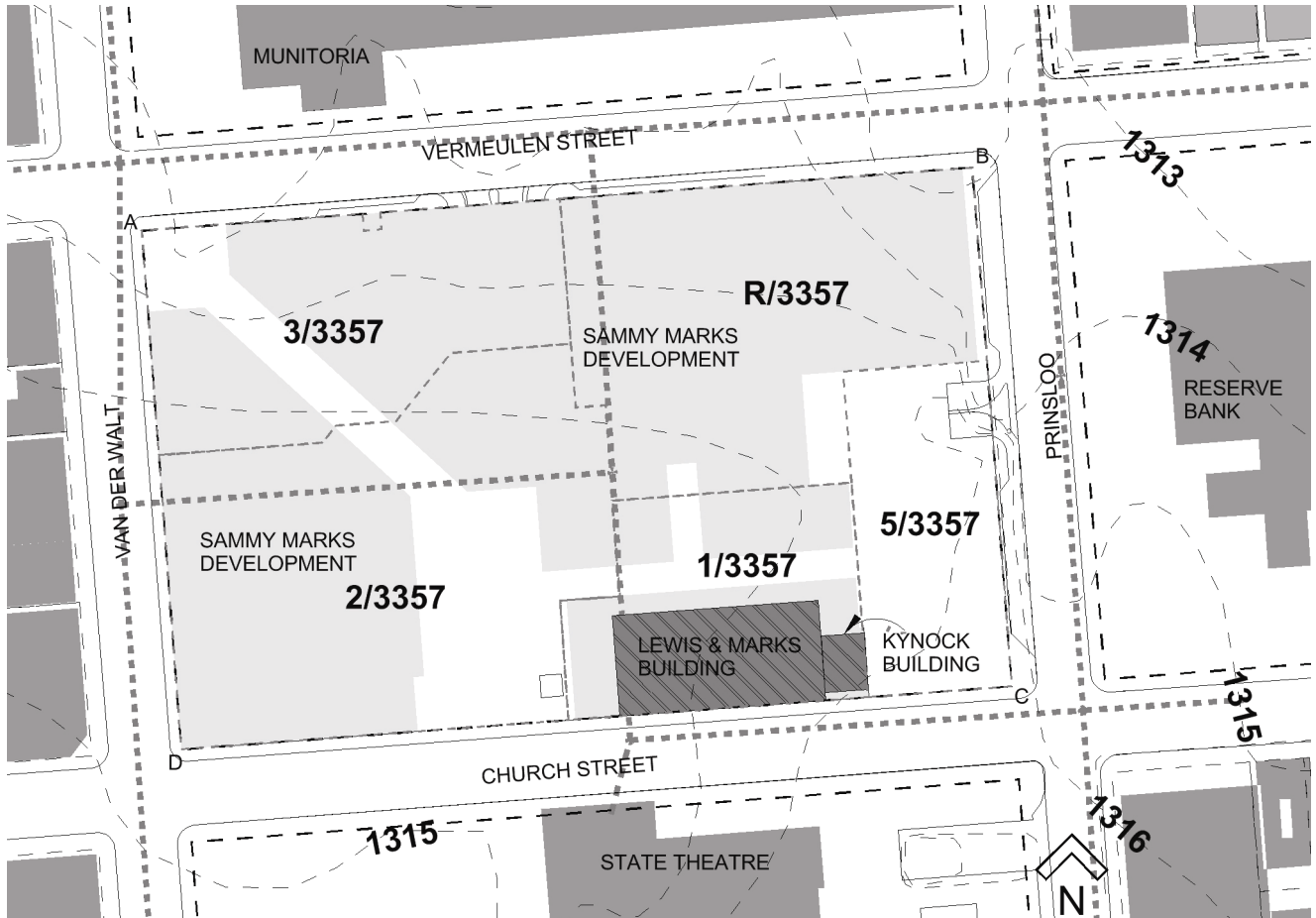
Physical & legal

ERF NO: 2/3357 & 1/3357 & 5/3357

OWNER: Municipality of Tshwane

MAXIMUM HEIGHT: 122m

Building lines: 6.5m from Prinsloo Street
3m from Church Street



	LENGTH	ANGLE
AB	221.03m	90°
BC	138.58m	90°
CD	221.03m	90°
DA	138.58m	90°

Illus 4.41. Physical & legal context