

# B\_PREPARATION\_Part 2

## FURTHER INVESTIGATION OF THE PROBLEM'S DIMENSIONS

Creativity is a complex mechanism, and its stages are in constant interplay (Wallas, 1926). As such, a second round of preparation was undertaken following the incubation

stage. The Conservatory Complex site was analysed in depth, preparing the author for the illumination and verification stages to come.

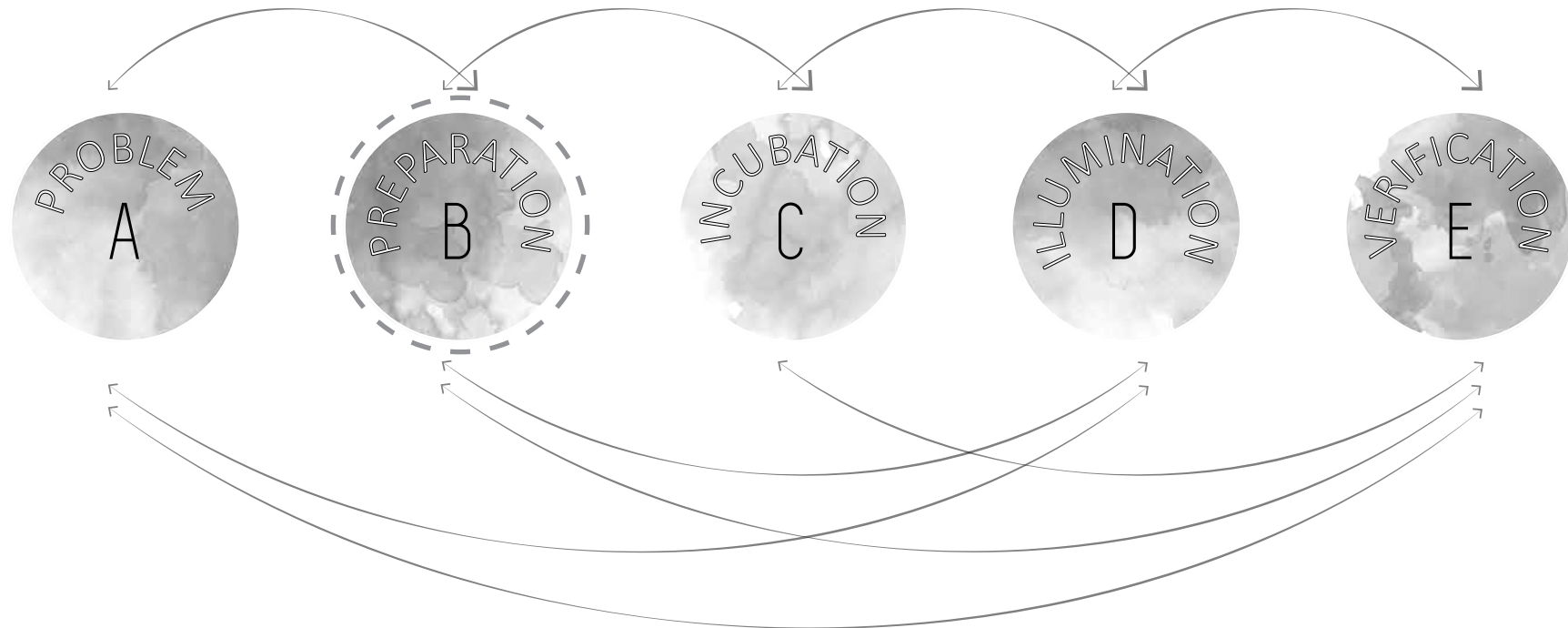


Figure 0.2  
(Author, 2016)



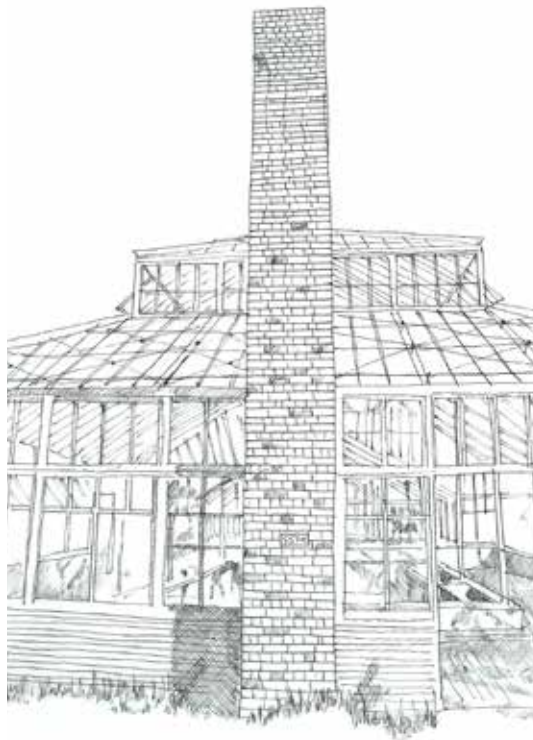


Figure 5.1  
*Sketch of the back of the Conservatory (Author, 2016)*

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# CHAPTER 05

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## THE JOUBERT PARK CONSERVATORY COMPLEX

Chapter 6 investigates and analyses the heritage and site conditions of the Joubert Park Conservatory Complex (the quadrant of Joubert Park housing the Conservatory) through mapping exercises, desktop research, photographic studies, and site visits. The chapter will help inform the conceptual, programmatic, and design development.

## 5.1 – THE JOUBERT PARK CONSERVATORY COMPLEX

### 5.1.1\_BACKGROUND

Joubert Park was envisioned as a green space in 1890, but it now holds a network of activities including informal trade, community facilities, a chess club, and the general traffic of 20,000 monthly visitors. The park is a highly accessible oasis in the crowded inner city with 800,000 commuters passing through the general area every day (The City of Johannesburg, 2006). Over the years, Joubert Park has become a transit hub where crime, unemployment and homelessness co-exist with informal trade, dense commuter traffic, and a wide range of cultural activity (Paine & Gould, 2011).

The history of Joubert Park reflects the gradual occupation of public space by restrictive non-public uses, as well as increasing restrictions to accessibility and use. Privatised organisations in the Park

which are fenced off from the public include:

- The Johannesburg Art Gallery (JAG) on the Southern edge.
- The Lapeng Crèche and Joubert Park Clinic in the NE corner.
- The Greenhouse Project and the Conservatory in the NW corner.

There is an opportunity to regenerate the Park through urban interventions which challenge the privatisation of public space, with a focus on the tangible and intangible heritage value of the area. The Joubert Park Conservatory has been identified as an iconic structure which may act as a catalyst for regeneration of the Park as a cultural space by aligning with the incentives of JAG and the City of Johannesburg.

The Conservatory is located in the NW corner of Joubert Park, Inner

City Johannesburg. It is the third of its kind on the site, and was built in 1939 to replace the Victorian Conservatory of 1906. Over the years, the structure fell into decay and a restoration process was initiated in 2001. Due to funding problems, the restoration of the Conservatory and development of its precinct is, as of yet, incomplete, and unfortunately the structure is once again falling into disrepair due to inadequate maintenance and neglect.



Figure 5.2  
Watercolour of Joubert Park heritage structures (Author, 2016)

## 5.1.2\_INTERPRETATION OF THE SITE

The Conservatory's narrative reflects an architecture of transformation and innovation, aimed at improving its environment. The fact that three versions of the Conservatory have existed on the same site is testament to the need of the building to adapt to fulfil its contemporary functions. The first conservatory was too small to house the plants required by Joubert Park, and so was replaced in 1906 by the larger Victorian Conservatory, which was a beautiful reflection of Victorian filigree, but was also demolished to make way for the current Conservatory in 1939, which boasted the latest glass and structural technology of Europe at the time.

All these conservatories had the same objective: to cultivate resources to enrich Joubert Park and the City. Thus, the site's character

is interpreted as a space of cultivation: providing a place for the nurturing of valuable resources, which were plants in the past, but are reinterpreted in this dissertation to fulfil current needs of the Park and City. This dissertation project takes a site specific approach to understand the dimensions of the Conservatory Complex and aims to respect and respond to the tangible and intangible characteristics of the site's identity and essence of place. The notion of cultivation becomes an underlying theme of the dissertation, guiding the theoretical, conceptual, and architectural resolutions. Continuing the Urban Vision strategy, the identity of the Conservatory Complex will be tied to culture and the arts.



Figure 5.3  
Sketch of the Conservatory (Author, 2016)

## 5.2- MACRO CONTEXTUAL ANALYSIS

### 5.2.1 CONNECTIONS TO THE JOUBERT PARK CONSERVATORY COMPLEX

The Joubert Park Conservatory Complex is linked by roads to various nodes of the City. These nodes inform the nature of access routes to the site. Connections and interpretations by the author are as follows:

A) Klein St  
Constitution Hill & Magistrates Court  
Identity of Route: Justice & Order

B) Kind George St, South  
The Linear Market  
Identity of Route: Retail

C) Kind George St, North  
Hospital Hill  
Identity of Route: Health & Wellness

D) Leyds and Bok St  
Park Station Transport Hub  
Identity of Route: Commuting

E) Wolmarans St  
End Street North Park and the University of Johannesburg  
Identity of Route: Relaxation & Education

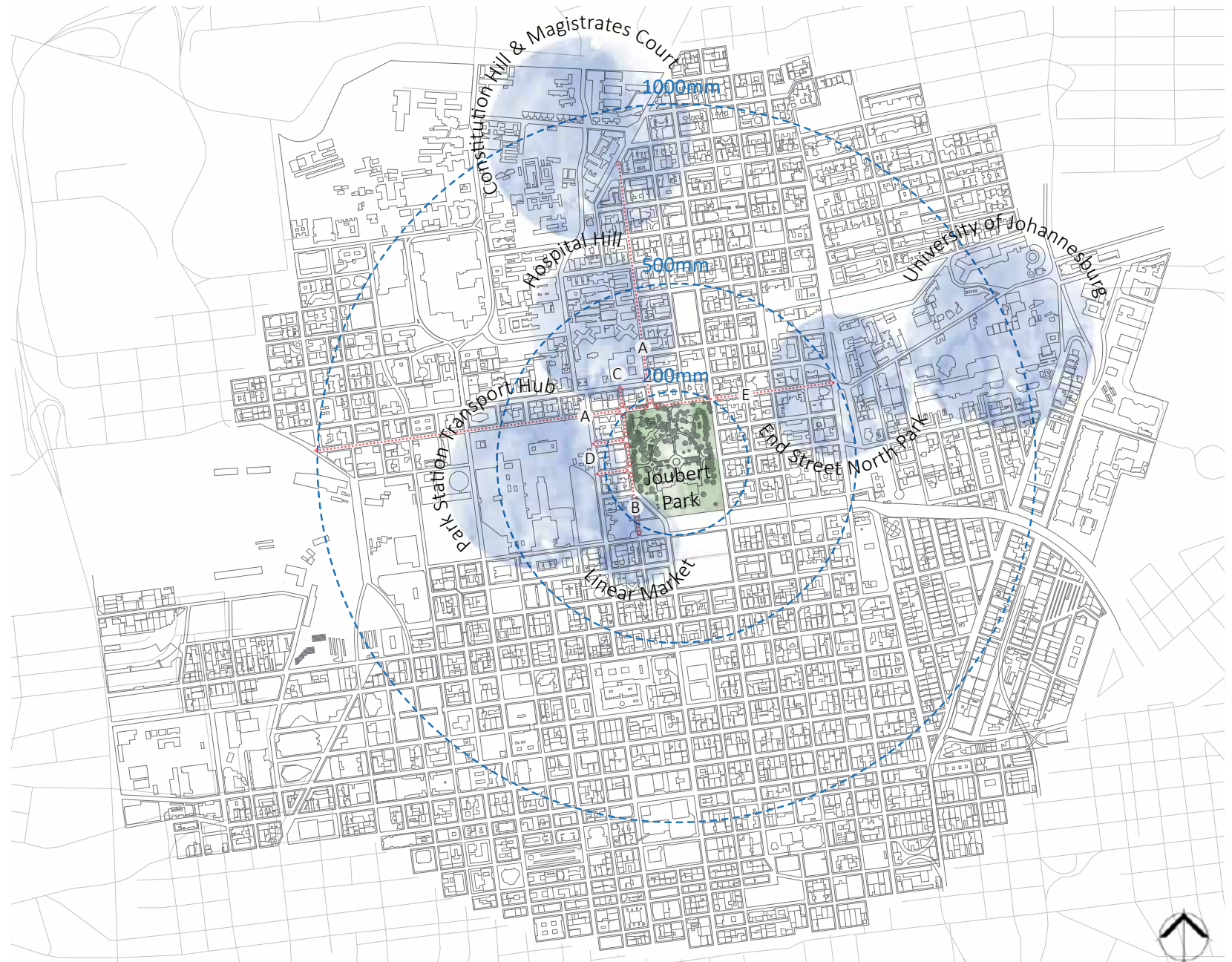


Figure 5.4  
Diagrammatic map of central Johannesburg indicating Joubert Park and the direct connections to nearby points of public interest (Author, 2016)

## 5.2.2\_CONTEXT WITHIN THE CITY

As illustrated in the adjacent aerial views, the Conservatory Complex has two different and distinct edge conditions: the northern and western edges are sidewalks, busy traffic, and tall residential blocks, while the southern and eastern edges are the soft, planted landscape of Joubert Park.

The Conservatory Complex may be perceived as lying at the crossroads of City and Park, built environment and natural environment, and any architectural intervention will have to respond to both contrasting conditions.

The Complex is also highly visible from the surrounding buildings, and is perceived as an extension of Joubert Park. Therefore, the Conservatory Complex has the opportunity to directly impact its context on a ground plane level, as well as indirectly from above.



Figure 5.5  
Google Earth perspectives of Joubert Park,  
highlighting the Conservatory and noting edge  
conditions (Author, 2016, adapted from Google  
Earth Pro, 2016)

## 5.3- MICRO CONTEXTUAL ANALYSIS

### 5.3.1 THE SETTING

An extensive physical analysis of Joubert Park's Conservatory Complex within its context was undertaken so as to understand the setting in which the dissertation project is rooted. Mapping of the micro context considered the measurement and position of all built fabric, as well as paths, trees, and informal trade stands. The blue arrows indicate the points of interest to which each street connects. Joubert Park's boundaries align to the grid layout of the City's streets and blocks, indicated on the map in red. The Conservatory, has its own axes, which are positioned so the main façade faces North West, the preferred orientation for a greenhouse in South Africa. The perimeter fence around the Complex has been mapped out and the formal entrances into the Park are indicated to show where people enter the space, as a low fence surrounds the Park boundary. The blue dots on the map show points where streets cross and the resultant pedestrian energy, of which the intervention ought to take advantage. The planning analysis is a subjective depiction of the physical fabric.

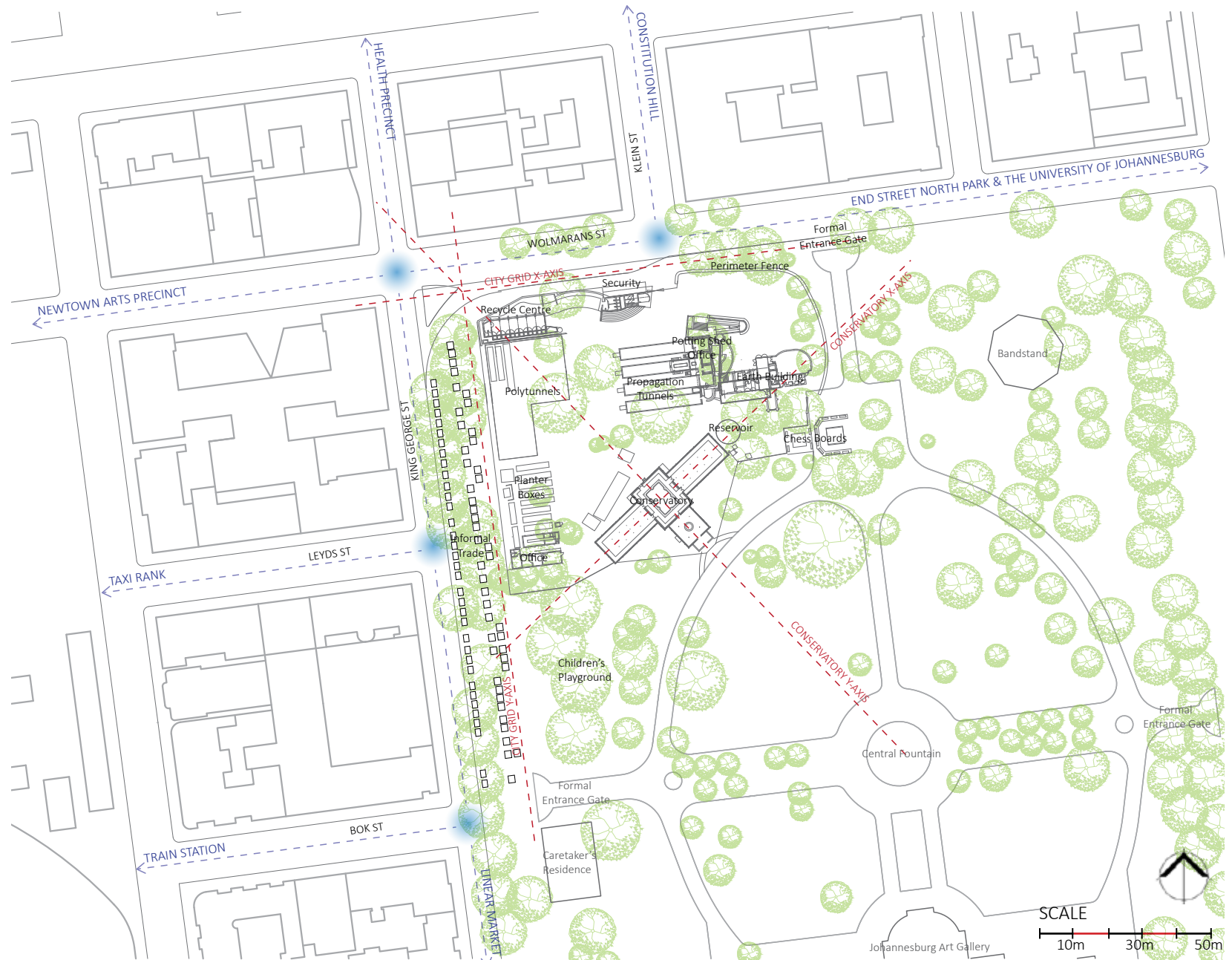


Figure 5.6  
Micro mapping the physical fabric of the site  
(Author, 2016)



Earth Building

Potting Shed Offices

Entrance Security



Potting Shed Offices

Propagation Tunnels

Polytunnels

Recycle Centre



Entrance

Propagation Tunnels

Conservatory

Polytunnels

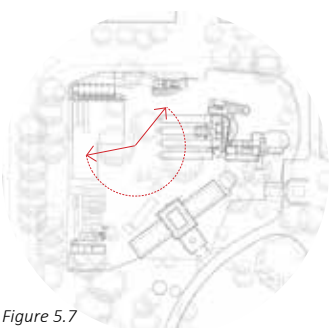


Figure 5.7  
Panoramic photographs of the site with key maps  
(Author, 2016)



### 5.3.2\_PHOTOGRAPHIC ROUTE

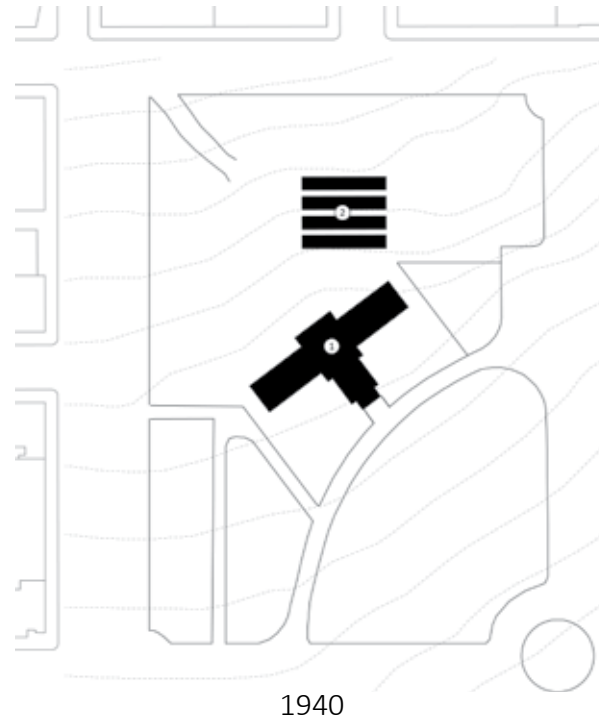
A site visit route and the following photographic study provide valuable information regarding the quality of space. Photographs were traced and marked with notes to understand various geometries, views, and space qualities which became informants for the design process.

*Figure 5.8  
The author's photographic site study as she  
walked around the precinct (Author, 2016)*

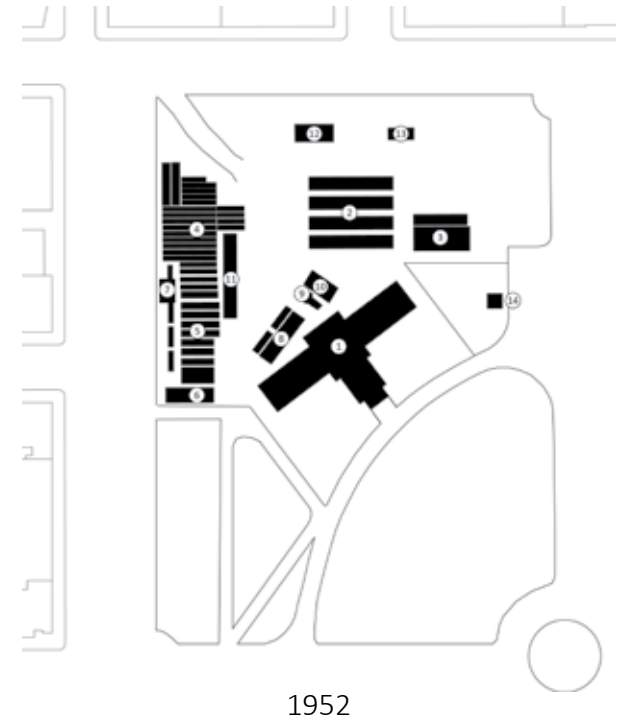


### 5.3.3\_HISTORICAL ANALYSIS

The following diagrams illustrate the historic development of the Conservatory Complex. Information was sourced from the Johannesburg Art Gallery maps and archives.



- 1 – Conservatory
- 2 – Propagation Tunnels



- 1 – Conservatory
- 2 – Propagation Tunnels
- 3 – Orchid Greenhouse
- 4 – Shallow Planting Beds
- 5 – Deep Planting Beds
- 6 – Offices
- 7 – Shed
- 8 – Propagation Tunnels
- 9 – Brick Substation
- 10 – Prefabricated Store
- 11 – Propagation Tunnel
- 12 – Store Room
- 13 – Public Ablutions
- 14 – Medium Public Chess Board

Figure 5.9  
A series of diagrams illustrating the changes in the Conservatory Complex's physical fabric over time (Author, 2016)



2001



2009



2016

- |                                |   |
|--------------------------------|---|
| 1 – Conservatory               | 17 – Covered Open-sided Store               |
| 2 – Propagation Tunnels        | 18 – Undercover Parking                     |
| 3 – Orchid Greenhouse          | 19 – Prefabricated Ablution                 |
| 4 – DEMOLISHED                 | 20 – Shade Structure                        |
| 5 – Deep Planting Beds         | 21 – Polytunnels                            |
| 6 – Offices                    | 22 – Prefabricated Store                    |
| 7 – DEMOLISHED                 | 23 – Prefabricated Change Rooms and Toilets |
| 8 – Propagation Tunnels        | 24 – Brick Poison Store                     |
| 9 – Brick Substation           | 25 – Brick Toilets                          |
| 10 – Prefabricated Store       | 26 – Security Hut                           |
| 11 – Propagation Tunnel        | 27 – Prefabricated Stores                   |
| 12 – Store Room                | 28 – Prefabricated Storage Shed             |
| 13 – Public Ablutions          | 29 – Steel Carport                          |
| 14 – Medium Public Chess Board | 30 – Potting Shed                           |
| 15 – Large Public Chess Board  |   |
| 16 – Reservoir                 |   |

- |                                |                             |
|--------------------------------|-----------------------------|
| 1 – Conservatory               | 19 – Prefabricated Ablution |
| 2 – Propagation Tunnels        | 20 – DEMOLISHED             |
| 3 – DEMOLISHED                 | 21 – Polytunnels            |
| 5 – Deep Planting Beds         | 22 – DEMOLISHED             |
| 6 – Offices                    | 23 – DEMOLISHED             |
| 8 – DEMOLISHED                 | 24 – DEMOLISHED             |
| 9 – Brick Substation           | 25 – DEMOLISHED             |
| 10 – Prefabricated Store       | 26 – DEMOLISHED             |
| 11 – Propagation Tunnel        | 27 – DEMOLISHED             |
| 12 – DEMOLISHED                | 28 – DEMOLISHED             |
| 13 – Public Ablutions          | 29 – DEMOLISHED             |
| 14 – Medium Public Chess Board | 30 – Potting Shed           |
| 15 – Large Public Chess Board  | 31 – Ramp and Stairs        |
| 16 – Reservoir                 | 32 – Earth Building         |
| 17 – DEMOLISHED                | 33 – Entrance Security      |
| 18 – DEMOLISHED                | 34 – Recycle Centre         |

- |                                |                        |
|--------------------------------|------------------------|
| 1 – Conservatory               | 21 – Polytunnels       |
| 2 – Propagation Tunnels        | 30 – Potting Shed      |
| 3 – DEMOLISHED                 | 31 – Ramp and Stairs   |
| 4 – DEMOLISHED                 | 32 – Earth Building    |
| 5 – Deep Planting Beds         | 33 – Entrance Security |
| 6 – Offices                    | 34 – Recycle Centre    |
| 7 – DEMOLISHED                 |                        |
| 8 – DEMOLISHED                 |                        |
| 9 – Brick Substation           |                        |
| 10 – Prefabricated Store       |                        |
| 11 – DEMOLISHED                |                        |
| 13 – Public Ablutions          |                        |
| 14 – Medium Public Chess Board |                        |
| 15 – Large Public Chess Board  |                        |
| 16 – Reservoir                 |                        |
| 19 – Prefabricated Ablution    |                        |

### 5.3.4\_EXISTING STRUCTURES

The Conservatory Complex houses various permanent and temporary structures, which have been added and removed from the Park depending on the requirements of those using the site. Most structures before the Greenhouse Project (2005) were built with the sole purpose of facilitating plant cultivation, such as greenhouses, propagation tunnels, stores, and services. The GHP added various buildings for administration and renting office space.

The South African Heritage Resources Agency (SAHRA) commissioned a heritage analysis of the Conservatory precinct in 2003 (CBS Architects, 2003). This was necessary to understand which structures on the site could be removed to make way for the new developments of the GHP.

The Report found that only the Conservatory was of important heritage value, especially in relation to its context in Joubert Park (CBS Architects, 2003). The propagation tunnels, which are the same age as the current Conservatory, are noted as medium heritage elements in

a hugely dilapidated condition. The Orchard Greenhouse plinth was retained by the architects of the Greenhouse Project and used as a foundation for the new rammed earth building, although the author of this dissertation believes that the Greenhouse possessed heritage significance and ought not to have been demolished. The remaining structures on the site are not considered of heritage importance and the masterplan of the GHP suggested the removal of these buildings.

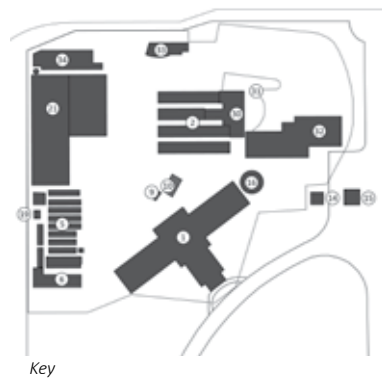
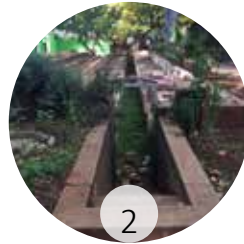


Figure 5.10  
Photographs depicting the current physical fabric on the site and assessing condition and significance (Author, 2016)



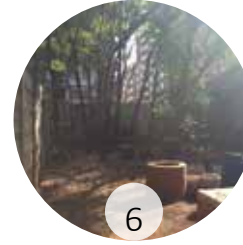
The Conservatory  
Date: 1939  
Present/ Past Use: Unused/ Greenhouse  
Current State: Dilapidated  
Historic Significance: Very High  
Architectural Significance: Very High  
Contextual Significance: Very High



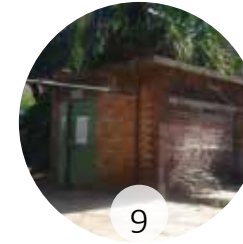
Propagation Tunnels  
Date: 1939  
Present/ Past Use: Unused/ Seedling Cultivation  
Current State: Dilapidated  
Historic Significance: High  
Architectural Significance: Medium  
Contextual Significance: High



Planting Beds  
Noted on Map: 1952  
Present/ Past Use: Urban Farming/ Planting Beds  
Current State: Dilapidated  
Historic Significance: Medium  
Architectural Significance: Low  
Contextual Significance: High



Offices  
Noted on Map: 1952  
Present/ Past Use: Unused/ Offices  
Current State: Good  
Historic Significance: Medium  
Architectural Significance: Medium  
Contextual Significance: Low



Brick Substation  
Noted on Map: 1952  
Present/ Past Use: Storage/ Substation  
Current State: Good  
Historic Significance: Low  
Architectural Significance: Low  
Contextual Significance: Low



Prefabricated Store  
Noted on Map: 1952  
Present/ Past Use: Storage  
Current State: Average  
Historic Significance: Low  
Architectural Significance: Low  
Contextual Significance: Low



Chessboards

*Noted on Map: 1952  
Present/ Past Use: Chess  
Current State: Good  
Historic Significance: High  
Architectural Significance: Low  
Contextual Significance: High*

14



Polytunnels

*Noted on Map: 2009  
Present/ Past Use: Unused/ Greenhouse  
Current State: Very Poor  
Historic Significance: Low  
Architectural Significance: Low  
Contextual Significance: Low*

21



Earth Building

*Date: 2009  
Present/ Past Use:  
Current State: Very Good  
Historic Significance: Very Low  
Architectural Significance: Medium  
Contextual Significance: Low*

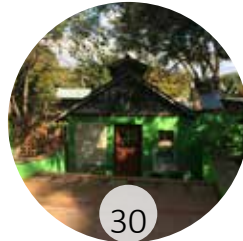
32



Reservoir

*Noted on Map: 2009  
Present/ Past Use: Reservoir  
Current State: Good  
Historic Significance: Medium  
Architectural Significance: Medium  
Contextual Significance: Low*

16



Office

*Date: 2009  
Present/ Past Use: GHP Office/ Potting Shed  
Current State:  
Historic Significance: Medium  
Architectural Significance: Medium  
Contextual Significance: Medium*

30



Entrance Security

*Date: 2009  
Present/ Past Use: Security Post  
Current State: Very Good  
Historic Significance: Very Low  
Architectural Significance: Medium  
Contextual Significance: Low*

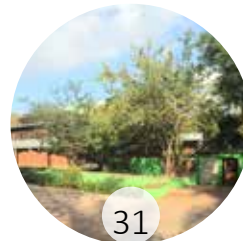
33



Prefabricated Ablution

*Noted on Map: 1952  
Present/ Past Use: Ablution  
Current State: Poor  
Historic Significance: Low  
Architectural Significance: Low  
Contextual Significance: Low*

19



Ramp and Stairs

*Date: 2009  
Present/ Past Use: Office Access  
Current State: Good  
Historic Significance: Very Low  
Architectural Significance: Low  
Contextual Significance: Low*

31



Recycle Centre

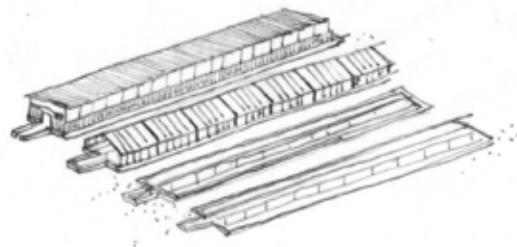
*Date: 2009  
Present/ Past Use: Recycle Centre  
Current State: Good  
Historic Significance: Very Low  
Architectural Significance: Medium  
Contextual Significance: Low*

34

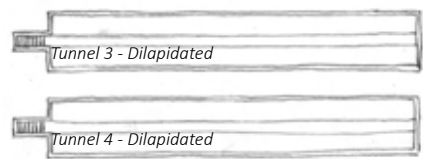
### 5.3.4.1\_Propagation Tunnels (2)

The Propagation Tunnels were built in 1939 to house the plants of the Victorian Conservatory while it was demolished and the new Conservatory constructed. The Tunnels are 1.5m below natural ground level and originally had glass roofs,

much like the Conservatory built at the same time. Unfortunately, only one such roof remains intact and the other tunnels are merely abandoned tunnels in the ground, forgotten spaces and scars in the landscape.



Sketch of the tunnels



Sketch Plan



Sketch Section



Tunnel 2



Tunnel 3



Tunnel 4



Panoramic photograph indicating the position of the tunnels



### 5.3.4.2\_The Conservatory (1)

The Conservatory is the most important heritage structure on the site, and although the current building was built in 1938, conservatories have occupied the site since 1893. The current Conservatory is built on a masonry support

structure with tiling placed on flattened earth. The structure is of teak, which has been restored and painted white by the GHP. Tension cross-bracing steel supports the timber members and has been restored. Glass was removed during

the restoration process, but has yet to be replaced completely and many panes which were installed are now shattered and damaged. Uncontrolled vegetation is invading the interior and damaging the architecture. The structure is fragile

and further restoration is vital to maintain the building, which is the heart of the Complex.



Front View



Back View

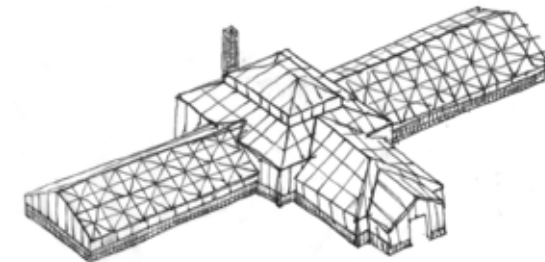


Interior View



Interior Panormaic of the Conservatory

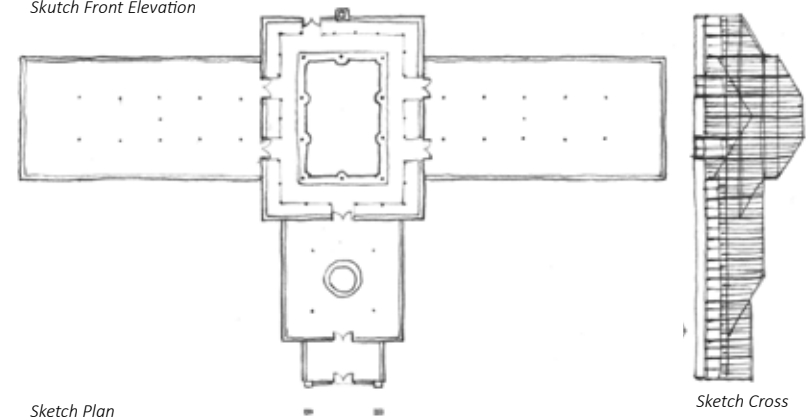
Figure 5.12  
The architecture, context, and current condition of the Conservatory (Author, 2016)



Sketch of the Conservatory



Skutch Front Elevation



Sketch Plan

Sketch Cross Section

5.3.5\_HISTORY OF THE CONSERVATORY



The Victorian Conservatory  
1906 - 1939



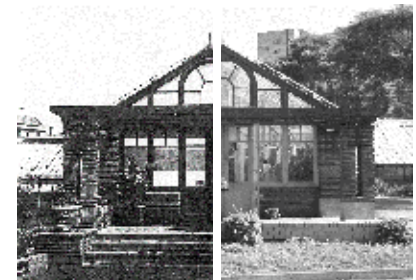
The Conservatory  
Built 1939



The Derelict Conservatory  
2001



Restoration of the Conservatory  
2003 -2005





The Abandoned Conservatory  
2016

The Conservatory was a place of wonder, with exotic plants hanging from the roof and beautifully planted flower beds. A central koi pond sparked the interest of children and adults alike, and the cultivated plants coloured the landscape of Joubert Park. The Conservatory was an event space, holding high teas, and a favourite backdrop for the park photographers. The memories are fading with the disintegration of the structure which once housed them.



Figure 5.13  
Photographic Timeline of the Conservatory  
(Author, 2016)

Figure 5.14  
Sketch of the Conservatory and a large tree  
(Author, 2016)



### 5.3.6\_SITE ANALYSIS MAPPING



Figure 5.15  
Zoning  
(Author, 2016)

#### 5.3.6.1\_Zoning

The Joubert Park Conservatory site is owned by the City of Johannesburg and currently managed by The Greenhouse Project (GHP), an independent non-profit organisation concerned with environmentally sound and socially just development within Johannesburg's civil society (Darroll, 2006). The

Complex is completely fenced off from Joubert Park, with a single entrance through a grand gate off Wolmarans Street. The Complex houses multiple structures, some of which were built by the Greenhouse Project in 2004 using sustainable building techniques, and others which are remnants of past

functions, such as the polytunnels on the western edge. The Conservatory exists as a partially restored, unused heritage structure and boundary in Joubert Park. Buildings adjacent to the site are small scale retail and there is a chess club and a children's playground, bringing activity to the area.

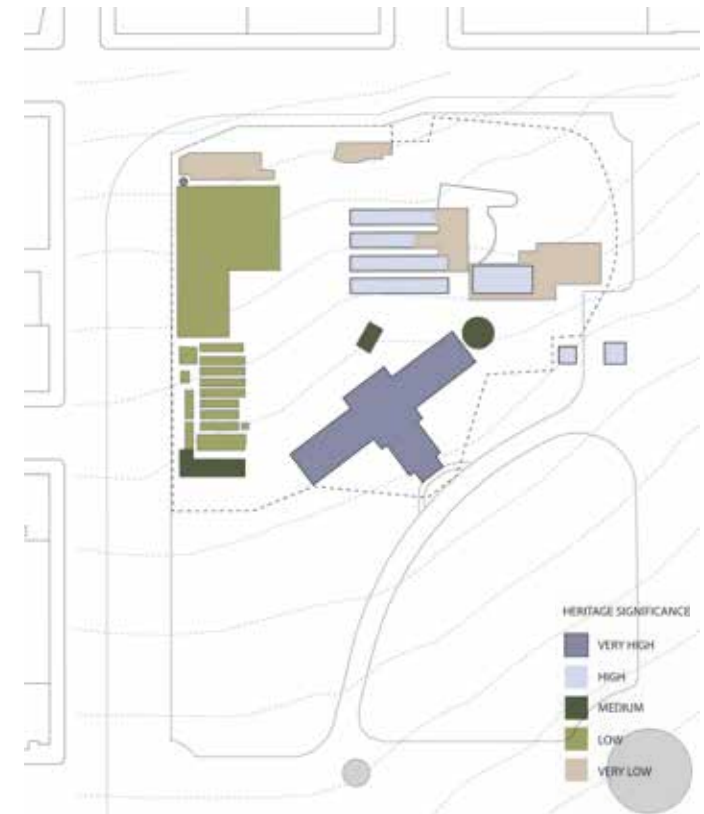


Figure 5.16  
Significance & Landmarks  
(Author, 2016)

#### 5.3.6.2\_Significance & Landmarks

The Conservatory Complex occupies a prime position in the landscape of Joubert Park, and the Conservatory structure is a landmark in space. However, its disconnection from the Park has diminished its significance. Various temporary structures are insignificant within the Park context and occupy valuable space while fulfilling no function.



Figure 5.17  
Trees  
(Author, 2016)

### 5.3.6.3\_Trees

The Conservatory Complex has beautiful trees, many of which have been there since the establishment of Joubert Park. The trees contribute to the making of spaces and the atmosphere of the site as an oasis in the city. Therefore, these trees are considered to have heritage value and will be important design drivers.

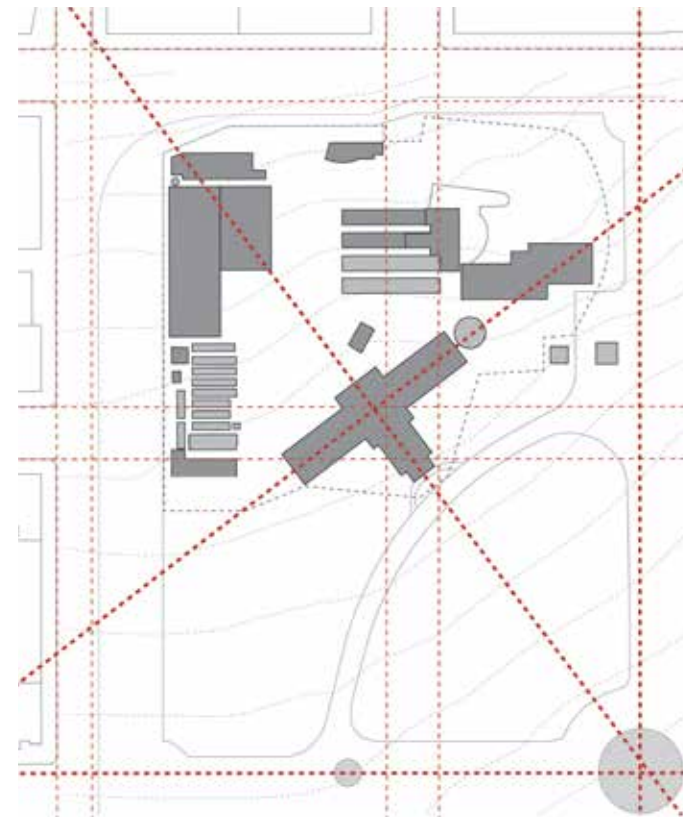


Figure 5.18  
Site Geometry  
(Author, 2016)

### 5.3.6.4\_Site Geometry

The site lies within the structured street grid of Johannesburg. The Conservatory lies off this grid, so that the majority of its façade faces north west, the ideal position for heating a greenhouse. Other structures on the site respond to the City grid axes.

### 5.3.6\_SITE ANALYSIS MAPPING [CONTINUED]



Figure 5.19  
Access  
(Author, 2016)

#### 5.3.6.5\_Access

Controlled access into the fenced-off Complex is achieved through one gate on Wolmarans Street, which is guarded by a security point. As the site is located on a prominent corner of Joubert Park, potential alternative access into the site can be achieved through all sides.

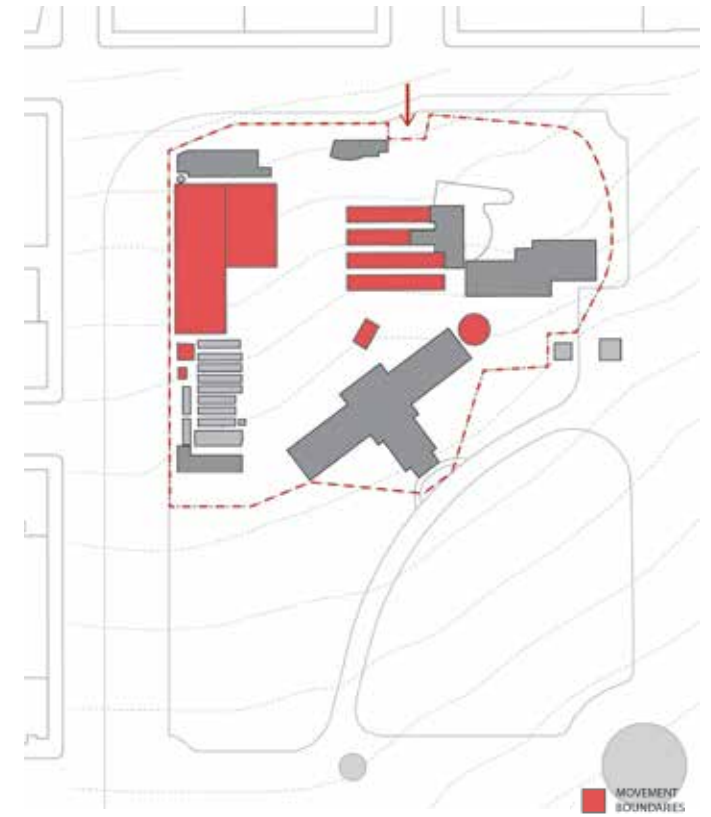


Figure 5.20  
Movement  
(Author, 2016)

#### 5.3.6.6\_Movement

The site is fenced off from its context, so there is no free flow of pedestrians in the space. Once access is granted by security, movement within the complex site is undefined, with no pathways. The overgrown vegetation and uneven terrain limit access and many temporary structures, such as the polytunnels and storage sheds are boundaries to movement.

## 5.4 – FUTURE RE-INVENTION

### 5.4.1\_CBS Architects Masterplan

CBS Architects developed a masterplan for the Greenhouse People’s Environmental Centre on the Conservatory site in 2001. Of the proposed buildings, only the earth building, the GHP office and the recycling centre were completed before funding became an issue. The Conservatory was also partially restored.

#### CRITIQUE OF THE MASTERPLAN

##### Positive Aspects:

- The planning considers the large heritage trees on the site.
- The Conservatory is the focus of the plan, with the new buildings framing it and a central courtyard.
- There are outdoor gathering spaces of different scales.
- There is cohesion between the elements on the site.
- Although the propagation tunnels are removed, the footprints are incorporated into the design.

##### Negative Aspects

- The site remains fenced off from the public and does not engage with the context.
- Forms do not respond to axes of the City grid or the Conservatory.
- The building materiality and language does not integrate well with

its surroundings.

- The buildings do not activate the street edges or promote interaction.
- The chessboards, informal street trade, and the playground are not considered in the planning.
- The programming of the site is inappropriate within Joubert Park.

##### Verdict

The masterplan is perceived by the author to be inappropriate for the Joubert Park site, as it does not create valuable public spaces and is cut off from its context. The opportunity to engage with the community and affect real change within the city is squandered.

### 5.4.2\_The Approach of this Dissertation

The architectural reinvention of the Conservatory and its Complex envisions its reintegration into Joubert Park and contribution to the urban environment as the Cultural Capital of South Africa. The Conservatory will be reconceptualised from a barrier into a gateway, inviting the public to engage with one another and the Complex.

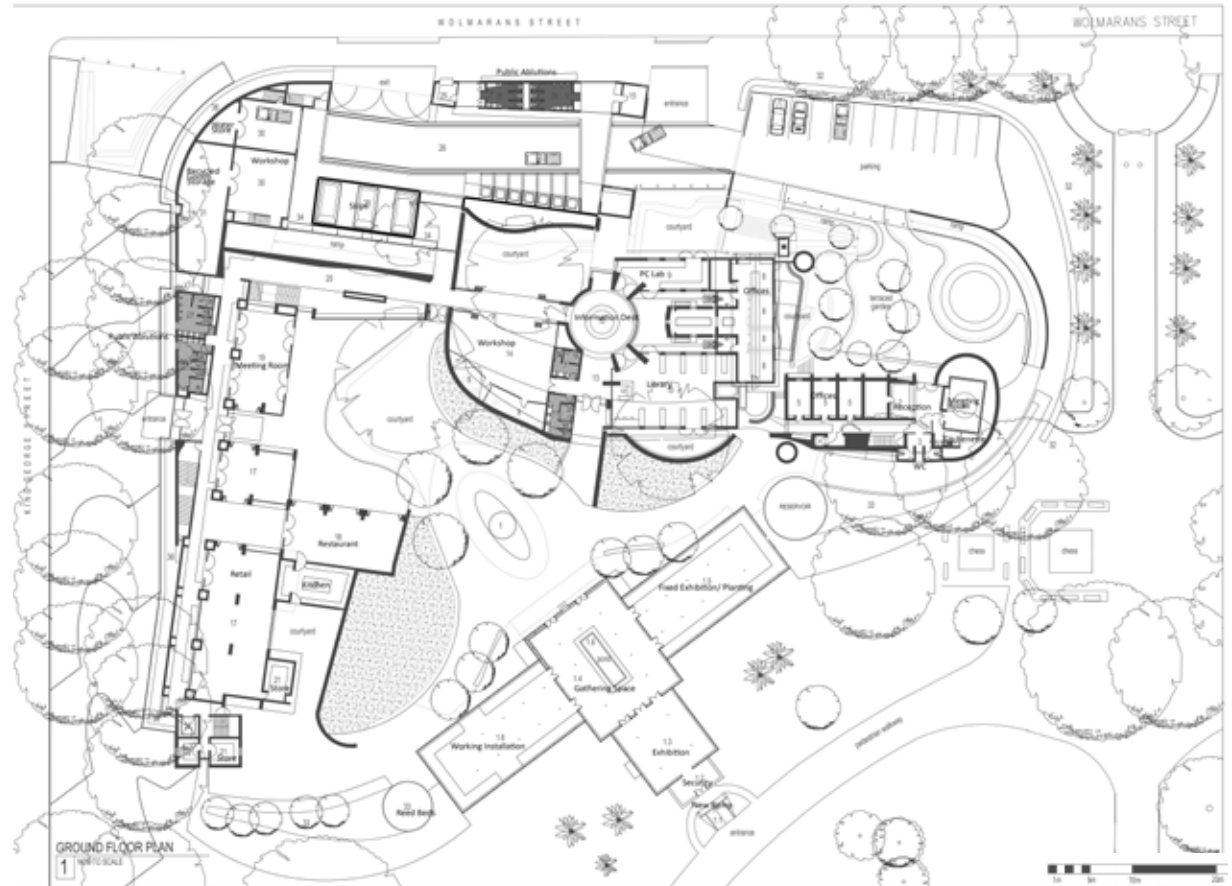


Figure 5.21  
Masterplan for the GHP (CBS Architects, 2001)

## 5.5 – THE CONSERVATORY TYPOLOGY

‘Typology’ in urban planning and architecture refers to the taxonomic classification of buildings. The conservatory typology has two distinctly different definitions as either an ornamental greenhouse or a school of the arts. The investigation into both interpretations finds the theme of cultivation to be the defining characteristic of a conservatory. This research allows for the reinterpretation of the Joubert Park Conservatory Complex, and informs the architectural intent and programme: a Creative Conservatory which supports the cultivation of creative thought and skills in inner city Johannesburg.

The following section studies the two typology definitions and various manifestations of conservatories across time and place, and their ability to cultivate.



Figure 5.22  
The two typologies of a conservatory  
(Author, 2016)



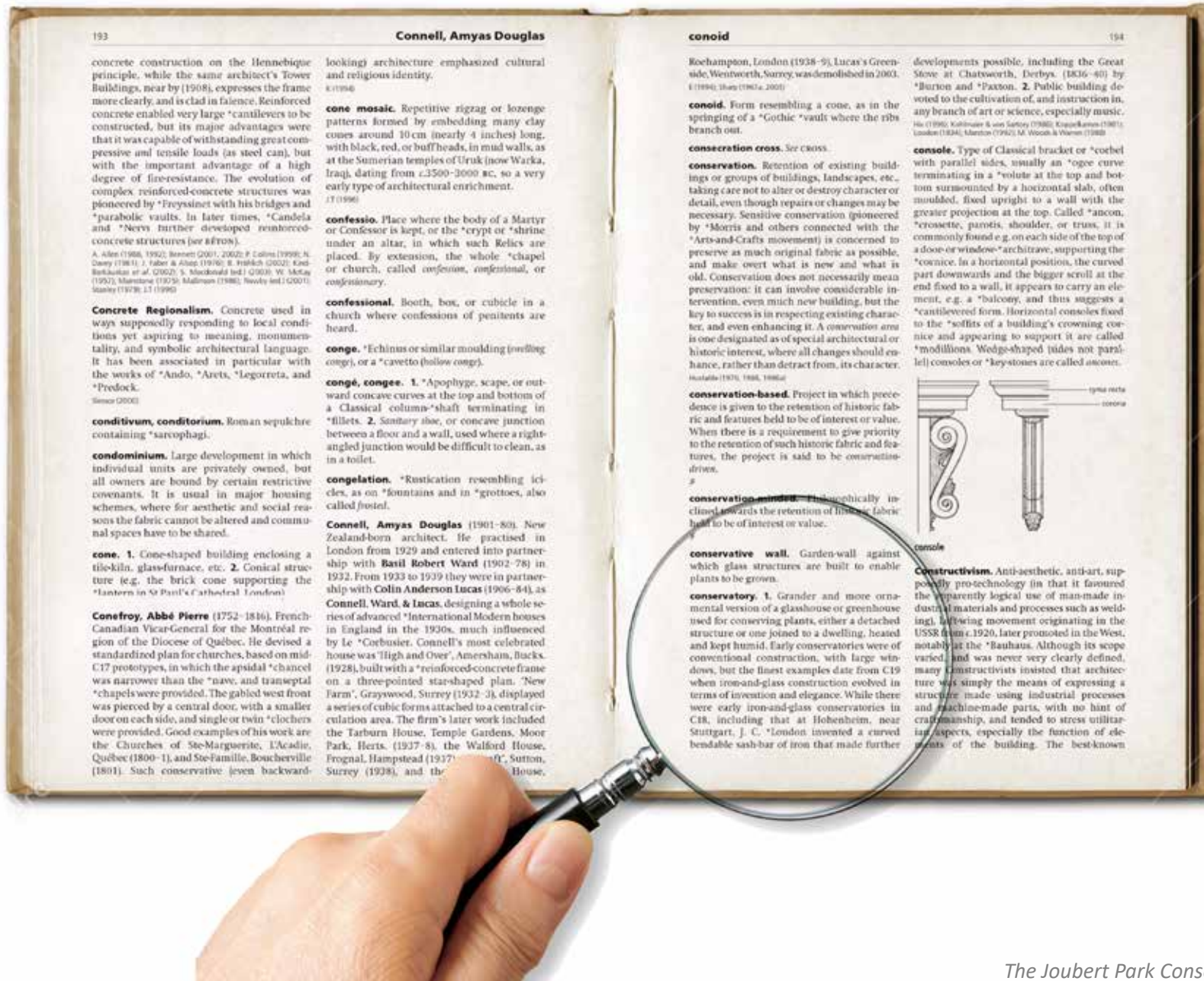


Figure 5.23  
Defining a conservatory (Author,  
2016, adapted from Curl, 2006)

## 5.5.2\_ORNAMENTAL GREENHOUSE

A conservatory is an ornate greenhouse whose architecture combines form with function (Leung, 2016). Like a greenhouse, a conservatory nurtures and protects plants, but it is also a beautiful glass enclosed space for entertaining and relaxing.

Conservatory architecture can be versatile and beautiful, and interpreted differently throughout the world. The following case studies briefly illustrate the dynamic nature of the ornamental greenhouse, and all these conservatories are landmarks within their context, driving the making of space. These precedents contribute to understanding the latent potential of the Joubert Park Conservatory to define and contribute to the making of space.



Figure 5.24  
(Munday, 2015)

### 5.5.2.1\_Palm House

Location: Ireland's Belfast Botanic Garden  
Architect: Charles Lanyon  
Date: 1840

Palm House is the earliest curvilinear cast iron glasshouse in the world (Martin, 2015). This illustrates the innovation involved in the construction of conservatories. These greenhouses were constantly updated with the latest technology, as witnessed with the Joubert Park Conservatory being replaced 3 times.



Figure 5.25  
(RGB Kew, 2015)

### 5.5.2.2\_Temperate House

Location: London's Kew Royal Botanic Gardens  
Architect: Decimus Burton  
Date: Commissioned 1859

Temperate House is the largest Victorian glasshouse in the world and took over 40 years to construct (Martin, 2015). The form and functionality of the Temperate House inspired the Joubert Park Conservatory, and when it was completed, Kew Gardens gifted exotic plants to Joubert Park in celebration and as a symbolic connection between them (CBS Architects, 2003).



Figure 5.26  
(Astrup, 2015)

### 5.5.2.3\_The Palm House

Location: Botanical Garden, Copenhagen  
Built by: J. C. Jacobsen  
Date: 1874

The Palm House is Victorian Style conservatory with a grand entrance, clearly asserting its importance within its context. A beautiful lily pond reflects the structure, contributing to its presence in space. This precedent is relevant as it explores the sense of arrival and hierarchy in conservatory architecture, which needs to be addressed at the Joubert Park Conservatory as it is reintroduced to the Park.



Figure 5.27  
(Polet, 2015)

### 5.5.2.4\_Royal Greenhouses of Laeken

Location: Brussels  
Architect: Alphonse Balat  
Date: 1874/95

The Royal Greenhouses of Laeken are located in the Royal Park, which is not accessible to the public. A domed greenhouse known as the 'Iron Church' was used as the royal chapel. This illustrates that conservatories can served multiple uses, as the warm, green, beautiful interiors were also used for tea parties and events.



Figure 5.28  
(Martin, 2015)

#### 5.5.2.5\_Palm House

Location: Schönbrunn Palace Park in Vienna  
Architect: Franz Segenschmid  
Date: 1881/2

Palm House is an impressive iron conservatory which employed the most modern technology of the age. It is the largest glass house in continental Europe, composed of 45,000 sheets of glass housing three different climate zones (Martin, 2015). Palm House is a popular tourist destination, which demonstrates how heritage fabric can have a positive impact by attracting people to the area.



Figure 5.29  
(Froese, 2015)

#### 5.5.2.6\_Muttart Conservatory

Location: Alberta, Canada  
Architect: Peter Hemingway  
Date: 1976

The four glass pyramids of the Muttart Conservatory are a landmark for the area and major tourist attraction (Martin, 2015). The unusual form of the Conservatory buildings is a reinterpretation of the classical Victorian designs shown in previous examples. The architectural language uses the same materials as 19th century conservatories but expresses them in a different way, which is also considered in this dissertation project.



Figure 5.30  
(Adelaide Botanic Gardens, 2015)

#### 5.5.2.7\_Bicentennial Conservatory

Location: Adelaide Botanic Garden  
Architect: Guy Maron  
Date: 1988

Bicentennial Conservatory is a contemporary interpretation of a greenhouse, and is the Southern Hemisphere's largest single span conservatory (Martin, 2015). The sculptural form was informed by the climatic needs of the Australian context, reflecting direct heat gain, collecting outside water, and shedding interior condensate. A modern interpretation of the Joubert Park Conservatory should also be driven by the contextual condition of the Park and the community.



Figure 5.31  
(Martin, 2015)

#### 5.5.2.8\_Greenhouses in the Botanical Garden of Curitiba

Location: Curitiba, Brazil  
Architect: Abraão Assad  
Date: 1991

This conservatory is an art nouveau style building resembling the Crystal Palace, and is a landmark and entry portal into the gardens (Martin, 2015). As the building is the gateway into the precinct, it is given hierarchical importance and defines the space beyond its boundaries. This dissertation explores this concept and the potential to activate the area around Joubert Park's Conservatory by asserting its importance in space.



Figure 5.32  
(CNP Collection, 2015)

#### 5.5.2.9\_Tropicarium

Location: Palmengarten, Frankfurt

The Tropicarium is an ensemble of 14 modern conservatories. The greenhouses simulate climates around the world and have distinctive angular glass façades (Martin, 2015). This example illustrates the versatility of ornamental greenhouse architecture, and how it is adjusted to suit contemporary fashions.

### 5.5.3\_SCHOOL OF THE ARTS

Conservatories of the arts provide facilities to cultivate music, theatre, art, and dance practise through practical training and academic studies. The aim of these institutions is to develop human potential through the arts, which are considered vital in humanity's pursuit of personal growth and social cohesion. Conservatories may also offer career development advice regarding the creative arts and students are given the opportunity to exhibit and perform on a regular basis, informally and formally.

Conservatory architecture is often designed as a reflection of the character and mission of the school. The conservatories of the early 19th century reflect the opulence and importance placed on the arts and artistic education. The architecture of modern conservatories is often exciting and expressive, much like the artistic practises housed within. The following examples are explored to help the author understand what a conservatory within the Joubert Park context ought to be.



Figure 5.33  
(Carlodell, 2012)

#### 5.5.3.1\_Conservatorio di musica di Milano

Location: Milan, Italy  
Date: 1808

The conservatory is based in the cloisters of the baroque church Santa Maria della Passione and is now the largest music school in Italy. The Conservatory is over 200 years old, but remains relevant to this day as it continues to contribute to its community and society. Its content and student intake has adapted with its community, as should any facility wishing to endure.



Figure 5.34  
(Packa, 2007)

#### 5.5.3.2\_The Prague Conservatoire

Location: Prague, Czech Republic  
Date: 1811

Prague is a vibrant city with a rich musical life, which drives and is driven by its Conservatory (The Prague Conservatoire, 2016). This illustrates the symbiotic relationship between a cultural programme and a cultural place. If Johannesburg is to be the Cultural Capital, it will need supporting facilities, such as conservatories.



Figure 5.45  
(Musical Opinion, 2016)

#### 5.5.3.3\_The University of Music and Performing Arts Vienna

Location: Vienna, Austria  
Date: 1817

The Conservatory is an example of a facility that has grown exponentially through its success and popularity. The University now has 24 departments in 20 buildings and new layers of built fabric have been added to the original conservatory in response to the changing needs of those enrolled.



Figure 5.36  
(Portzamparc, 1990)

#### 5.5.3.4\_Conservatoire de Paris

Location: Paris, France  
Architect: Portzamparc Christian  
Date: 1990

Conservatoire de Paris' architecture recognises the importance of adaptability in the creative environment. The building has adjustable performance spaces and the performers often exchange the classroom for the stage so as to have contact with the public. This interaction between students and the public is an inspiring digression from the classical conservatories of previous examples.



Figure 5.37  
(Wagenaar, 2016)

### 5.5.3.5\_Conservatorium van Amsterdam

Location: Amsterdam, The Netherlands  
Architect: De Architekten Cie  
Date: 2008

Conservatorium van Amsterdam is a U-shaped building with the courtyard facing the cultural plaza. The cultural plaza and the building work together to generate vibrant creative spaces and engage students as well as the community in the creative arts. The design organises components vertically in clusters from collective to individual (ArchiTeam, 2013). This approach to clustering allows for cross-overs between different people and departments, which is also explored in this dissertation project.



Figure 5.38  
(One Office Architects, 2009)

### 5.5.3.6\_Juilliard School Expansion

Location: New York, NY  
Architect: FXFOWLE Architects in collaboration with Diller Scofidio + Renfro  
Date: 2009

Juilliard's new building's entrance introduces performance to the street level and provides studios, rehearsal rooms, a black box theatre and offices. This precedent is relevant as it engages with the street edge, rather than enclosing and restricting artistic expression within its walls. Therefore, the public is able to experience the activity within and engage with the arts in an informal manner.



Figure 5.39  
(Hueber, 2011)

### 5.5.3.7\_The Royal Conservatory

Location: Toronto, Ontario, Canada  
Architect: KPMB Architects  
Date: 2009

The glass and steel of the Royal Conservatory's new addition dynamically contrasts with the colourful facades of the surrounding heritage buildings (The Royal Conservatory, 2016). The relationship between old and new in this precedent is valid as they are easily distinguished from one another, yet strengthen each other's presence in space.



Figure 5.40  
(Ipswich Studios, 2016)

### 5.5.3.8\_Boston Conservatory at Berklee

Location: Boston, Massachusetts, United States  
Architect: Handel Architects LLP  
Date: 2012

The building is an extension to the Boston Conservatory, which is the oldest performing arts conservatory in the nation. It has a large orchestra hall, dance studios, and practise spaces (Architizer, 2016). This is an example of a new extension to an existing heritage building which enables the Conservatory to serve the needs of the community. This illustrates that building must be open to adapt if they wish to remain relevant.



Figure 5.41  
(Cerdan, 2015)

### 5.5.3.9\_Nantes Conservatory

Location: Nantes, France  
Architect: RAUM + L'Escout Architectures  
Date: 2015

The ground floor of the Nantes Conservatory has glass stacking doors that enable dance and music to spill out into a public courtyard and engage with an informal audience. The Conservatory defines interior and exterior space, providing different spaces for artistic and cultural expression. This dissertation project also considers various platforms of engagement and how architecture can facilitate expression.

## 5.5.4 THE JOUBERT PARK CONSERVATORY

Past



### ORNAMENTAL GREENHOUSE

The 19th century was the golden age of conservatories in Europe, driven by a love of gardening and the development of glass technology. Since its inception, Johannesburg intended to conform to images of western modernity (Bremner, 2000). As such, architectural fashions of the day were imported, such as the Conservatory at Joubert Park. The Conservatory was an ornamental palace filled with botanical wonder. The architecture and contents alike awakened the imagination and connected visitors to the Park and their European roots.

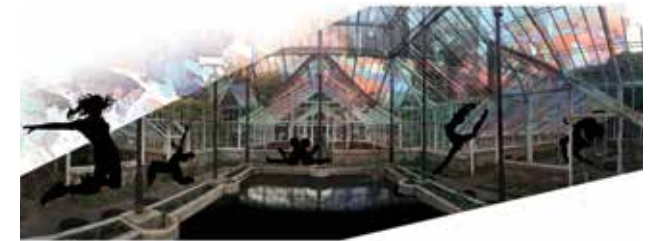
Present



### ABANDONED CONSERVATORY

The Conservatory lies in a state of disrepair and abandonment, as its function as a greenhouse is no longer required. Once a landmark, it now fades into the background, hidden by overgrown vegetation and boundary fences.

Future



### CREATIVE ARTS CENTRE

The future of the Conservatory lies in rethinking the conservatory typology in inner city Johannesburg. This dissertation aims to connect the Conservatory to its neighbour, JAG, by introducing a creative arts theme. Thus, the alternate definition of a conservatory as a place of the arts becomes a programmatic driver. The creative theme stitches the fragments of Joubert Park's landscape.

Figure 5.42  
Sequence of the Conservatory's Past, Present & Future (Author, 2016)

## 5.6 - SYNOPSIS



Figure 5.43  
Sketch of the Conservatory's interior  
(Author, 2016)

The Conservatory Complex presents an exciting opportunity to engage with an abandoned heritage structure and reinvigorate the precinct spatially by including the public in the programming of the space. The typology of a conservatory needs to be rethought within the context of Joubert Park and Johannesburg so that the new architectural intervention is appropriate, while respecting the rich heritage of the site.