Conclusion

This final chapter concludes the exploration of the Creative Conservatory, a journey which the author hopes has impacted the reader’s outlook on creativity, the important role it plays in placemaking and its contribution to a flourishing physical, social, and economic environment.
10.1_JOHANNESBURG’S RENAISSANCE

CONCLUDING THE CREATIVE CONSERVATORY

The City of Gold is on the cusp of a renaissance, a great revival of art, literature, and learning (Oxford Dictionary, 2016). The objective of this dissertation was to undertake an architectural intervention capable of rejuvenating its tangible and intangible historical, cultural, social, and natural heritage to exemplify this unique identity of place, maintain relevance for future generations, and contribute to Johannesburg’s renaissance, branding as the Cultural Capital, and the development of the creative economy.

The chosen site was the Joubert Park Conservatory Complex, the location of the beautiful, century old, yet abandoned and decaying, ornamental greenhouse. The importance of the Conservatory within its context waned as its function was no longer relevant, resulting in the degeneration of its presence. When heritage fabric no longer contributes to its environment, it fades into obscurity. This dissertation considered the potential of heritage structures, such as the Conservatory, to be reinterpreted to suit present needs and how architecture can express the dialogue between the past, present, and future to rejuvenate its context.

The dissertation methodology followed the creative process of Wallass (1926), starting by posing the problem to be investigated: how a spatial intervention could be mobilised to re-establish the forgotten significance of the site, and introduce a programme that would respect and enhance the heritage of the Conservatory and its cultural landscape to contribute to Joubert Park as well as the greater urban environment as the Cultural Capital. A preparation stage followed, analysing the context on a micro and macro scale from inner city Johannesburg to Joubert Park, and the Conservatory Complex. Then, the incubation period considered the theory of creative placemaking and adaptive reuse of heritage fabric, leading to further preparation and understanding of the latent potential in the Conservatory site. This allowed for the illumination stage to commence, in which a programme was established: the Creative Conservatory, a place for the cultivation of arts and media within the community. The final stage, verification, developed an architectural intervention which considered all previous steps to generate a solution to the problem posed. The design exploration and further technical investigation resulted in a project which responds to its context and is able to create spaces which stimulate networking and engagement between the creative industries and facilitate various levels of creative expression. This, in turn develops Johannesburg’s creative economy and asserts its identity as the Cultural Capital of South Africa.

The Creative Conservatory is a contextual response to the tangible and intangible heritage of the Conservatory and Joubert Park, introducing an architectural intervention which is relevant for the current community but respects heritage significance. The intangible heritage of the Conservatory as a place of cultivation inspired the programmatic response, and the tangible architectural language of the structure drove the tectonic concept. As such, the project provides a good precedent for the wider discipline of adaptive reuse in heritage architecture.

The dissertation’s extensive investigation and application of creative placemaking in Johannesburg contributes to the discipline of architecture by exploring the ability of arts and culture to shape place. This study is especially relevant as Johannesburg endeavours to become the Cultural Capital, as it highlights the potential to mobilise the creativity of the existing community by rethinking public space in the city.

The Creative Conservatory rises seamlessly from its Park landscape, framing the Conservatory and finding conceptual inspiration in its presence. Its architectural expression is appropriate within Joubert Park, responds to and is inspired by the Conservatory’s tangible and intangible heritage, and is able to contribute to social, economic, and cultural development of inner city Johannesburg, giving momentum to the blossoming renaissance.

PERSONAL REFLECTION

I have always been passionate about the arts, at school I studied fine art, specialising in oil painting, I starred in musicals and theatre, and love reading and writing. The arts have always been my mode of expression, and in this dissertation I investigated the power of arts and culture in placemaking and architecture. As architects, we design places in which people can dwell. We cannot predict the nature of the dwelling, but we can provide spaces which inspire and stimulate certain activities. This project could be taken further, indeed it could spill out into the entire city. As I came to understand the multifaceted condition of Joubert Park, I realised that there are layers I have yet to discover, which would enrich the Creative Conservatory and the City. This year has been an exploration into the making of place that awakens the latent potential of the past to enrich the present and contribute to a thriving future, an investigation that I began as a student and will continue as an architect.
‘Engagement with arts combines stretching oneself and focusing, feeling the senses, expressing emotion or helping to self-reflect. The result can be: to broaden horizons, to convey meaning, with immediacy and or depth, to communicate iconically so you grasp things in one without needing to understand step by step, to help nurture memory, to symbolise complex ideas and emotions, to see the previously unseen, to learn, to uplift, to encapsulate previously scattered thoughts, to anchor identity and to bond people to their community or by contrast to stun, to shock by depicting terrible images for social, moral, or thought-provoking reasons, to criticise or to create joy, to entertain, to be beautiful. The arts can even soothe the soul and promote popular morale. More broadly expression through the arts is a way of passing ideas and concepts on to later generations in a (somewhat) universal language. To have these effects the arts have to be communicated. For these reasons the arts and their institutions are seen as lying at the core of culture...The best cities are ultimately experienced as living works of art.’

Charles Landry (2011, p. 22)
Creativity, Culture & the City – A Question of Interconnection
Assessment of Dissertation Document
Candidate: Lisa Verseput
Title: The Creative Conservatory
External examiner: Daniel van der Merwe

Comments

The dissertation is well composed, structured and edited. It communicates clearly and logically its intentions, approaches, explorations and the design investigation processes leading up to a design conclusion. Precedent case studies are well documented, lessons learned and applied as components of a design strategy is not always clear. Graphically the dissertation is extremely well supported. The theoretical propositions and analysis are mature and extensive. As precepts they create the necessary orientation and set a high level of expectation with regard to the final design conclusions. The bibliography is exhaustive. Overall the document is professionally well put together. The quest for an authentic Architecture is commendable. Theoretical discourses allow for the development of a strong architectural strategy. Design explorations communicate the search for relevance and allows for a good final conceptual conclusion. The motivations and development of programme activities and its intentions are well developed. Overall an excellent dissertation, the presentation of which I’m looking forward to.
The following pages provide a summary of the work pinned up on the wall and presented in the final examinations, including models of various scales.
Joubert Park is a significant park in Johannesburg, located West of Joubert Park. It was established in 1887 by the Executive Council of the City of Johannesburg. The park was supported by the Johannesburg Conservatory, which was established in 1888, to tend to the plants of the Park.

In 1892, Joubert Park was taken for railway lines, and the park's space was reduced. However, the park continued to grow and develop, with various features added over the years. In 1904, Joubert Park was remodelled by A.H. Stirrat to include children's playgrounds following the ground-breaking ethos of parks for people as winners of a competition.

In 1905, City Council called for tenders for a new iron and glass conservatory to replace the existing conservatory, which was suffering due to its imperfection. The estimated cost of the new conservatory was £3,000. The existing Victorian Conservatory was simultaneously demolished.

In 1939, the West and East wings of JAG were extended, and a new conservatory was completed. The old conservatory and existing Victorian Conservatory were transformed into a ramp and a car park, respectively.

In 2001, the Greenhouse Project was established, and the entrance to the park was completed. The park station taxi rank was also completed the same year. In 2002, R3 Million was provisionally allocated to the park.

In 2003, all steel members were taken offsite for removal, and the existing glass was removed. In 2004, the teak frame was painted white, and damaged or rotting timber was replaced.

In 2005, all window sections were removed for restoration, and the remaining glass was removed. In 2006, the conserved exterior was restored to its original appearance, and the interior was restored to the original design.

In 2007, locust swarm devastated the park, and a snowstorm devastated it in 2009.

In 2010, Joubert Park was a Fan Park for the 2010 Soccer World Cup. In 2015, the Johannesburg Art Gallery (JAG) addition was completed.

In 2016, Joubert Park today is at risk of becoming a taxi storage lot. It is a Fan Park for the 2010 Soccer World Cup, and it is at risk of becoming a taxi storage lot.

The park is located in the Newtown Financial District Park, The Creative Conservatory, and the University of Johannesburg. It is also the location of the City of Johannesburg and the City of Johannesburg Metro Council. The park is a significant feature of the city, and its history and development are important to the city's cultural and historical heritage.
REIMAGINE

FRAME

CELEBRATE

ARCHITECTURE THAT:

INTEGRATES WITH THE PARK

IS INSPIRED BY HERITAGE

CONtributes TO DEVELOPMENT

HERITAGE RESPONSE

REIMAGINE

FRAME

CELEBRATE

THE POWER OF 10

REGION _ INNER CITY JOHANNESBURG, PREVIOUSLY THE 'UITVALGROND'

A REGION HAS AT LEAST 10 NODAL DESTINATIONS

DESTINATION _ THE JOUBERT PARK PRECINCT

A DESTINATION HAS AT LEAST 10 PLACES

PLACE _ THE CONSERVATORY COMPLEX

A PLACE OFFERS AT LEAST 10 ACTIVITIES, WHICH ARE LAYERED TO CREATE SYNERGY

© University of Pretoria
The Creative Conservatory

A Community Media & Creative Arts Centre

© University of Pretoria
Iron Grass (Aristida diffusa) flowers in summer and golden hairs in basal leaf sheaths are ornamentally covered by Hairy Trident Grass (Tristachya leucothrix) is a perennial grass that flourishes in sun or semi-shade. Spear Grass (Heteropogon contortus) is a variable grass that can be plant in embankments, roofs and dunes. It is a common groundcover of the Highveld landscape. The grass is adorned with attractive golden a loose, pink inflorescence. The grass flowers in spring irrespective of rainfall.

Red Dropseed (Sporobolus festivus) is a grass with seeds year round and flowers in spring. Violet enjoys sun and can be planted on embankments, roofs and dunes. It is a small, green, scrambling shrub with olive-green leaves and cymes of white flowers from August to January. The grass flowers in summer and must be cut back in autumn. The grass is adorned with attractive golden blooms. The common Wild Pear is ideal for the garden. It is a slender tree with glossy, waxy leaves that smell of lavender when crushed. In spring, yellow, scented flowers appear. The Common Wild Pear is ideal for many garden situations. It is a small, green, scrambling shrub with olive-green leaves and cymes of white flowers from August to January. The grass flowers in summer and must be cut back in autumn. The grass is adorned with attractive golden blooms. The common Wild Pear is ideal for the garden. It is a slender tree with glossy, waxy leaves that smell of lavender when crushed. In spring, yellow, scented flowers appear. The Common Wild Pear is ideal for many garden situations.

Water strategy

Wetland filtration

Vertical flow constructed wetland

System components

LARGE BASKET FILTER

The filter is buried and accessible through a ground level every winter.

OPTIGREEN PROTECTION & STORAGE FLEECE TYPE RMS 500

OPTIGREEN DRAINAGE BOARD TYPE FKD 60 BO (60mm)

OPTIGREEN INTENSIVE SUBSTRATE TYPE i (230-350mm)

An underground storage system has been selected as it is unobtrusive and unaffected by freezing weather. The underground water chamber consists of modular plastic elements wrapped in waterproofing and backfilled with earth. The modules are easy to assemble and can be manipulated to fit any site size requirement. Each module creates a void space capable of storing 360 liters. The modules withstand vehicular traffic and are easy to inspect without disturbing the surface. The filters used are large plastic baskets within a plastic body. Water flows through the inlet port and the filter and out the outlet port, filtering 100% of the rainwater.

A motorised three-port valve connects the rainwater and municipal backup water supplies to the plumbing system. The valve is connected to the rainwater supply by default, but switches to the backup supply if the tank reaches a pre-set water level.

Rainwater that has been prefiltered can be used for landscape irrigation and exterior applications, but needs to be treated for use within the building. A large screened filter basket sits within a plastic body, and water flows through the inlet port and the basket and out the outlet port, filtering 100% of the rainwater. The filter is buried and accessible through a ground level every winter.

Rainwater from the roof is directed to underground storage chambers. The rainwater is filtered through large plastic baskets and then directed to underground storage chambers. The system is designed to capture 100% of the roof runoff and direct it to underground storage chambers. The system is designed to capture 100% of the roof runoff and direct it to underground storage chambers.
Conclusion

...
Joubert Park Model
Scale 1:1000

Indicating the three interventions of the JPG and proximity to JAG
NORTHERN JOUBERT PARK MODEL
SCALE 1:500

Indicating the relationship between the Creative Conservatory and the Urban Archive
CREATIVE CONSERVATORY MODEL
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SECTIONAL DETAIL MODEL
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# APPENDICES

## APPENDIX A

### WATER CALCULATIONS

#### RAIN WATER HARVESTING DATA

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>AREA (m²)</th>
<th>RUNOFF COEFF. (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Roof</td>
<td>1795.515</td>
<td>0.2</td>
</tr>
<tr>
<td>Conservatory Roof</td>
<td>631</td>
<td>0.9</td>
</tr>
<tr>
<td>Roof</td>
<td>313.236</td>
<td>0.9</td>
</tr>
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</table>

**TOTAL AREA (A):** 2789.75

**WEIGHTED C:** 0.42

#### TOTAL WATER YIELD

<table>
<thead>
<tr>
<th>MONTH</th>
<th>AVERAGE RAINFALL (mm)</th>
<th>CATCHMENT YIELD (m³)</th>
<th>TOTAL WATER YIELD (m³)</th>
<th>TOTAL WATER YIELD (litres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>0.13</td>
<td>148.87</td>
<td>148.87</td>
<td>148870.06</td>
</tr>
<tr>
<td>February</td>
<td>0.26</td>
<td>113.95</td>
<td>113.95</td>
<td>113950.28</td>
</tr>
<tr>
<td>March</td>
<td>0.05</td>
<td>107.19</td>
<td>107.19</td>
<td>107186.44</td>
</tr>
<tr>
<td>April</td>
<td>0.15</td>
<td>64.31</td>
<td>64.31</td>
<td>64311.86</td>
</tr>
<tr>
<td>May</td>
<td>0.11</td>
<td>15.48</td>
<td>15.48</td>
<td>15482.49</td>
</tr>
<tr>
<td>June</td>
<td>0.01</td>
<td>10.72</td>
<td>10.72</td>
<td>10718.64</td>
</tr>
<tr>
<td>July</td>
<td>0.00</td>
<td>4.76</td>
<td>4.76</td>
<td>4763.64</td>
</tr>
<tr>
<td>August</td>
<td>0.01</td>
<td>7.15</td>
<td>7.15</td>
<td>7145.76</td>
</tr>
<tr>
<td>September</td>
<td>0.03</td>
<td>32.16</td>
<td>32.16</td>
<td>32155.53</td>
</tr>
<tr>
<td>October</td>
<td>0.01</td>
<td>8.34</td>
<td>8.34</td>
<td>8336.72</td>
</tr>
<tr>
<td>November</td>
<td>0.01</td>
<td>13.10</td>
<td>13.10</td>
<td>13100.56</td>
</tr>
<tr>
<td>December</td>
<td>0.10</td>
<td>122.57</td>
<td>122.57</td>
<td>122568.53</td>
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</table>

**ANNUAL AVG.:** 645.59

**MONTHLY AVG.:** 53.89

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### WATER DEMAND

<table>
<thead>
<tr>
<th>Use</th>
<th>Litres Per Use</th>
<th>Uses/day</th>
<th>Days Per Week</th>
<th>Usage Per Month (litres)</th>
<th>Usage Per Month (m³)</th>
<th>Annual Usage (m³)</th>
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<tr>
<td>Shower</td>
<td>30</td>
<td>2</td>
<td>7</td>
<td>1560</td>
<td>1.68</td>
<td>20.16</td>
</tr>
<tr>
<td>Toilet</td>
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<td>30</td>
<td>7</td>
<td>7560</td>
<td>7.56</td>
<td>30.72</td>
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<td>WHB</td>
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<td>7</td>
<td>1260</td>
<td>1.26</td>
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<td>2</td>
<td>7</td>
<td>560</td>
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<td>Dishwasher</td>
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<td>2</td>
<td>7</td>
<td>340</td>
<td>0.34</td>
<td>10.08</td>
</tr>
<tr>
<td>Food Prep</td>
<td>3</td>
<td>30</td>
<td>6</td>
<td>5000</td>
<td>5.0</td>
<td>48.2</td>
</tr>
<tr>
<td>WHB</td>
<td>2</td>
<td>30</td>
<td>6</td>
<td>1140</td>
<td>1.14</td>
<td>13.78</td>
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</table>

**TOTAL**

|                     | 16940          | 16.94    | 203.28        |

### GREY WATER

<table>
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<tr>
<th>Use</th>
<th>Per Month (litres)</th>
<th>Per Month (m³)</th>
</tr>
</thead>
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<td>Shower runoff</td>
<td>1680</td>
<td>1.68</td>
</tr>
<tr>
<td>WHB runoff</td>
<td>2700</td>
<td>2.7</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>840</td>
<td>0.84</td>
</tr>
<tr>
<td>Food Prep</td>
<td>960</td>
<td>9.6</td>
</tr>
</tbody>
</table>

**TOTAL**

|                     | 8820             | 8.82          |

### WATER BUDGET

<table>
<thead>
<tr>
<th>Use</th>
<th>Per Month (litres)</th>
<th>Per Month (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess Water</td>
<td>53890.96</td>
<td>53.89096591</td>
</tr>
<tr>
<td>Greywater</td>
<td>8820</td>
<td>8.82</td>
</tr>
</tbody>
</table>

**TOTAL**

|                     | 62710.96          | 62.71096591    |

### PRIMARY TANK REQUIREMENT

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<th></th>
<th>Demand/Month (m³)</th>
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### SECONDARY TANK REQUIREMENTS

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## APPENDIX B

## ENERGY CALCULATIONS

<table>
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<tr>
<th>INDOOR AREAS</th>
<th>Dimensions</th>
<th>Area</th>
<th>Lux Required</th>
<th>Lumens</th>
<th>Light Type</th>
<th>LUMENS/UNIT</th>
<th>WATT/UNIT</th>
<th>QUANTITY/AREA</th>
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<th>AMOUNT OF ROOMS</th>
<th>HOURS USE/DAY</th>
<th>TOTAL POWER DRAW (Watt/Hour/day)</th>
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<th>Lumens</th>
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<th>WATT/UNIT</th>
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<th>TOTAL WATT</th>
<th>AMOUNT OF ROOMS</th>
<th>HOURS USE/DAY</th>
<th>TOTAL POWER DRAW (Watt/Hour/day)</th>
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### OUTDOOR LAMPS WITH OWN PV PANELS

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<th>Light Type</th>
<th>LUMENS/UNIT</th>
<th>WATT/UNIT</th>
<th>QUANTITY/AREA</th>
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<th>AMOUNT OF ROOMS</th>
<th>HOURS USE/DAY</th>
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### ELECTRICITY USAGE

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<th>Average hours run time per week</th>
<th>Total hours run time per week</th>
<th>Watt-Hours per week</th>
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**Total watt hours per week:** 1313428

### ANNUAL SOLAR POWER GAIN

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<th>Ave monthly sunshine</th>
<th>Power gain (kW)</th>
<th>Total Power Gain (kWh)</th>
<th>Total power demand/month (kW-hrs)</th>
<th>Power Gain/loss (kW-h)</th>
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### PY PANELS

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<th>No. of tiles</th>
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</table>

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