Epilogue
11 Conclusion

The exploration of architecture as an interface between the urban and natural realms was undoubtedly influenced by my love for nature and its inspiring beauty. As an urban dweller and Pretoria resident, the intention of creating a building that would serve as a new interface between its urban inhabitants and Pretoria’s natural heritage, particularly the underutilised Berea Park, is considered invaluable due to the potential improvement it could make to the quality of public urban life in our city. This dissertation consequently focussed on developing a hybrid architecture that would merge building and landscape to create a new typology capable of connecting people and “nature” in the context of Pretoria.

The investigation and iterative process presented several challenges, but the outcome has delivered an approach that may offer guidance and spatial considerations for future projects to be developed along Pretoria’s river corridor and underutilised open areas. Although the prospect of re-naturalising the Apies River and returning it to its original state is deemed to be unfeasible, other means of creating “natural” water elements and reciprocate relationships between the built environment and landscape can be employed.

The Hybrid illustrates the concept of creating an urban environment where “nature” is celebrated and integrated in urban placemaking in the city of Pretoria. The project provides access, as well as new public programmes and activities along a previously sterile, disconnected and negative edge of Berea Park. By establishing a building that is an extension of the park, it ultimately creates a new topography and spatial continuation between the surrounding context, the city and the Berea Park landscape. The resulting architectural product is considered to be an apt response to the investigated contextual challenges. The design and resolution was informed by factors related to the city as well as “nature”, with specific focus on the Berea Park landscape and an approach to reinstate a tangible notion of the Apies River.

The hope is that the combination and confluence of the above mentioned factors in the final development of the Hybrid has rendered a building and spaces that will assist in creating a sense of place, where the surrounding community can flourish and people can interact. The public nature of the building should enable a variety of people and the broader city community to access and experience “nature” in the city, whilst engaging in social and other recreation activities. This will culminate in the attribution of new value and meaning to the Berea Park landscape and the new ecological waterfront as a symbol of the Apies River.
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<td>BRT</td>
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<td>CBD</td>
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<td>Council of Scientific and Industrial Research</td>
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<td>LVL</td>
<td>Laminated Veneer Lumber</td>
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<td>MPa</td>
<td>Mega Pascal</td>
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<td>National Heritage Resources Act</td>
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<td>RIDP</td>
<td>Regional Integrated Development Plan</td>
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<td>RRC</td>
<td>River Restoration Centre</td>
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<td>SBAT</td>
<td>Sustainable Building Assessment Tool</td>
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<td>SHGC</td>
<td>Solar Heat Gain Coefficient</td>
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<td>UDISA</td>
<td>Urban Design Institute of Southern Africa</td>
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References
Available from: http://uscdn.creamermedia.co.za/assets/articles/attachments/59814_running_on_empty_water_efficiency_report.pdf
[Accessed: 2016-04-07]


[Accessed: 2016-03-18]

[Accessed: 2016-04-18]


[Accessed: 2016-04-21]


[Accessed: 2016-07-10]

BUCHANAN, P. 2012. The big rethink farewell to modernism. Architectural Review, 231, 1380, pp. 82-93

[Accessed: 2016-05-10]


FRESHWATERWATCH. An Earthwatch research project developed by the Earthwatch Institute. Available from: https://freshwaterwatch.thewaterhub.org/content/ecosystem-services [Accessed: 2016-03-22]


RRC, the River Restoration Centre. 2014. Cranfield University, Cranfield, United Kingdom. Available from: http://www.therrc.co.uk/practitioners/biodiversity-design-ltd [Accessed: 2016-03-04]


VAN DER MERWE, D. 2011. Architectural Concrete, a guide to achieving high-quality finishes. Midrand: Cement and Concrete institute


