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[Infra] structuring connectivity: a communal water-frame on the Jukskei River

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Fig 8 (Above) The existing networks of the site (Author, 2019)
Fig 9 (Opposite) River Sketch (Author, 2019)

Abstract

How can an infra-architecture response mitigate a more connective environment between our built and natural landscapes?

The world is running out of quintessential resources. Fresh water sources are at their most critical state and are estimated to be depleted within the next 30-40 years if action is not taken (Harvey,2018). South Africa is not exempt from this morbid future. Rapid non-sustainable developments, failing infra-structures and lack of knowledge act as the primary mitigators for environmental destruction. This can be witnessed along the entirety of the Jukskei river. This calls for a more systematic architecture that operates through an interdependent network between the built and natural environment. The situation calls for a more systematic architecture that operates holistically between landscape, infra-structure and architecture. The vision is thus; to develop a design proposal that maintains existing ecologies for future generations while supporting current amenities. Methodologically, this thesis uses a case study to conduct research for the design process. The inquiry revisits the concept of Supersurface, a term that was introduced by Superstudio in the 70s. The study looks at the relevance of the Supersurface in the current context of the Jukskei river, and reinterprets the holistic approach for the larger Johannesburg site. The appropriateness of the scheme will be ‘tested’ in the form of a filtration plant and waterpark. In order to create a stable and continuous relationship between the complexities of the built and natural environments, a composite, but connective, venture is required: the infra-architecture.

