

## ABSTRACT

Since the dawn of time human settlements have developed around water as a 'lifeline' that supports agriculture, trade, transport and cultural interactions. Our urban river courses form a critical component in the city's natural system and should be afforded the necessary priority and investment towards becoming a central theme in the development of a sustainable urban ecosystem.

The Jukskei River, with its origin in the Bezuidenhout Valley, is Johannesburg's largest river system that dissects the urban landscape before it joins the Crocodile river 50km later in the north. A significant proportion of the adjoining urban communities actively 'ignore' this critical green infrastructure and the river is conveniently transformed into space characterized by urban encroachment, dumping, pollution and sewerage run off.

This complete disregard for the ecological significance of the Jukskei urban river systems has led to the formation of a highly contested space facing a range of serious social, urban and ecological challenges. This precarious position is particularly evident in Alexandra, compounded by significantly overcrowding that places increased demand on an already struggling infrastructure network.

The Alexandra urban precinct is intimately tied with the Jukskei river system and presents a unique opportunity to create a sustainable public open space system that could exist in balance and support of future densification and regeneration strategy.

A central proposition in this research report aims to investigate the opportunity for urban river courses to be repositioned as the necessary 'infrastructure backbone' required to guide and support future infrastructure investment, urban growth and regeneration of the Alexandra precinct in a sustainable manner that offer opportunities to residents and the city at large.