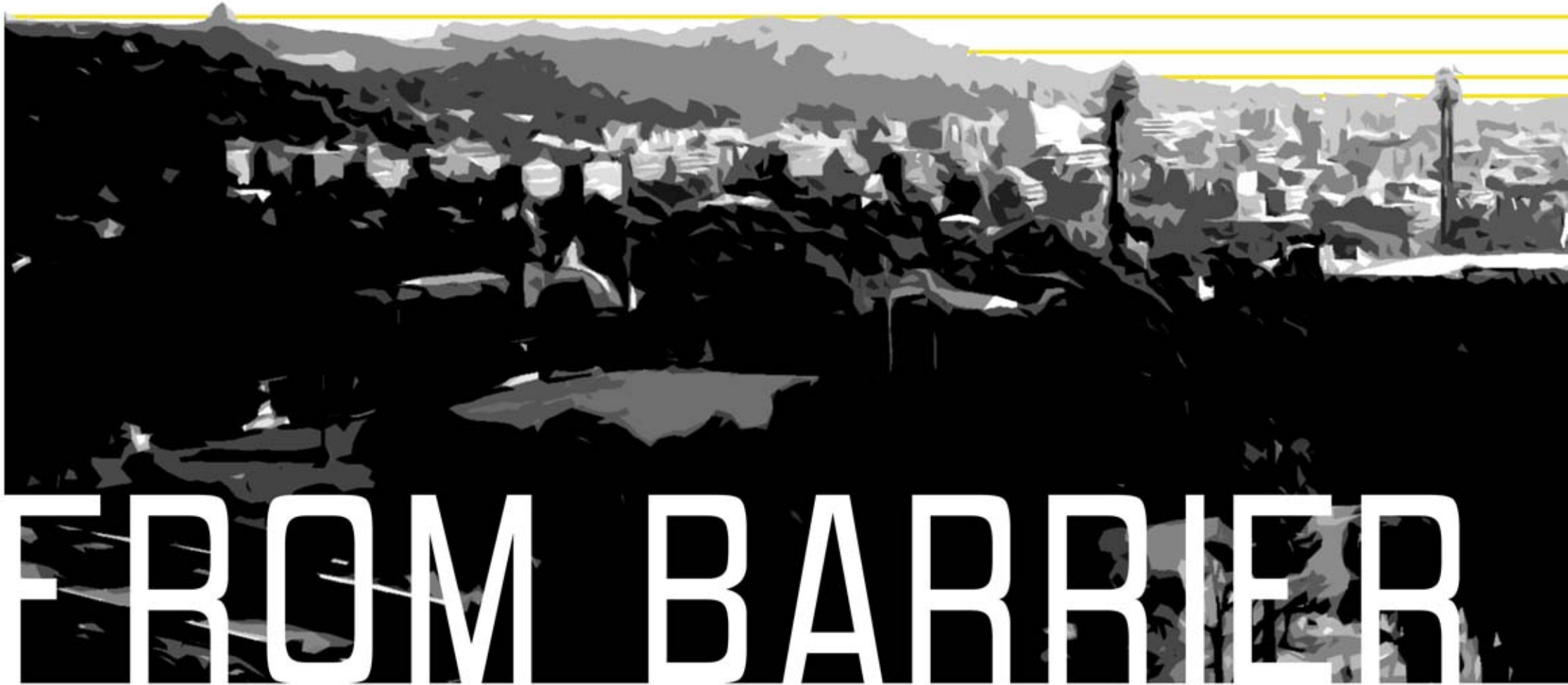




UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

L O F T U S M E T R O

© University of Pretoria

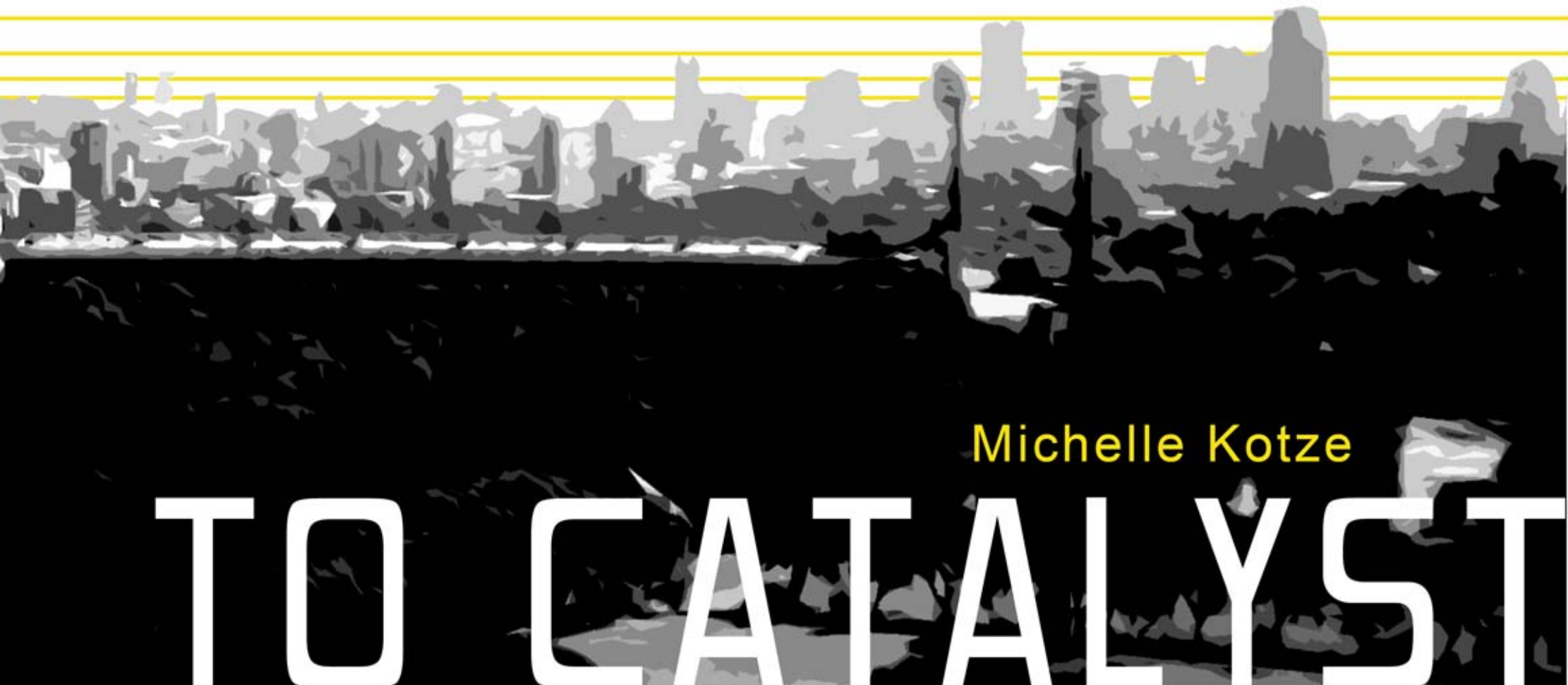


FROM BARRIER



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

R A I L S T A T I O N



Michelle Kotze

TO CATALYST

## Executive summary

South Africa is more than ever, in need of a public transport system integrated within its surroundings. A successful transportation network needs an environment where users can change transport systems with ease and peace of mind. The ultimate goal is to achieve a pedestrian orientated city. This dissertation will attempt to address these problems by redesigning Loftus Metrorail Station located in Hatfield, Pretoria, South Africa.

Within the transport node, Loftus station, the challenge is to combine the different movement systems intersecting at this point, reinforcing connectivity and accessibility. The transition from public to private needs to be clear and legible - this can be achieved through the appropriate design of the building interface, and clearly defining spatial boundaries. The sense of place is lacking in this area, already containing various landmarks associated with Hatfield. These landmarks assist with the legibility of the project area. This orientation device assists with ease of movement and circulation within the area. The defragmentation of facilities in the Loftus precinct area is due to the large scale of the city block. Loftus station becomes a barrier between the University of Pretoria and Loftus Versfeld Stadium. It is an isolated site - dislocated from its surroundings. The lack of facilities has lead to the station becoming underutilized and dilapidated. By dividing the study area into human scaled city blocks, the area becomes manageable. This division reinforces already existing pedestrian movement patterns. The activation of edges and transparency of the structure ensures a secure environment. The different movement systems at this node influenced the design and choice of materials used in the project. The user requirements had to be satisfied. The careful integration of commerce within the station and surroundings ensure not only a transition space, but also a controlled and activated destination place.



**MICHELLE KOTZE**

**23054655**

Submitted in fulfilment of part of the requirements for the Degree of Magister in Architecture  
(Professional) in the Faculty of Engineering, Built Environment and Information Technology

University of Pretoria  
Department of Architecture  
2008

Mentor: Gary White  
Study leader: Ida Breed



# List of Figures

## Chapter 1

- 1.1 Image: Smit, B et al., 1971. *Gauteng: The complete map book*. South Africa: Map Studio
- 1.2 Image: [www.sarcc.co.za/images/sarcc\\_logo.gif](http://www.sarcc.co.za/images/sarcc_logo.gif). [Accessed 24 September 2008]
- 1.3 Image: [www.coros.co.za/pictures/logo/metro\\_rail.jpg](http://www.coros.co.za/pictures/logo/metro_rail.jpg). [Accessed 24 September]
- 1.4 Image: [www.terrapinn.com/TRes/Organisation/O325559.gif](http://www.terrapinn.com/TRes/Organisation/O325559.gif). [Accessed 24 September]
- 1.5 Image: [www.tshwane.gov.za/marabastad/images/city\\_of\\_tshwane2006lores.jpg](http://www.tshwane.gov.za/marabastad/images/city_of_tshwane2006lores.jpg) [Accessed 24 September]

## Chapter 2

- 2.1 Photograph by Tienie van Rooyen [13 August 2008]
- 2.2 Photograph by Tienie van Rooyen [13 August 2008]
- 2.3 Image by Author
- 2.4 Image by Author

## Chapter 3

- 3.1 Image by Author
- 3.2 Image by Author
- 3.3 Image: Geography Department. University of Pretoria. [14 February 2008]
- 3.4 Image: Geography Department. University of Pretoria. [14 February 2008]
- 3.5 Image: Geography Department. University of Pretoria. [14 February 2008]
- 3.6 Smit, B et al., 1971. *Gauteng: The complete map book*. South Africa: Map Studio
- 3.7 Image by Author
- 3.8 Photograph: Parking study: University of Pretoria
- 3.9 Photograph by Tienie van Rooyen [13 August 2008]
- 3.10 Photograph by Author [22 April 2008]
- 3.11 Photograph by Author [25 March 2008]
- 3.12 Photograph by Author [22 April 2008]
- 3.13-18 All photographs by Author
- 3.19-26 All photographs by Author
- 3.27 Diagram by Author
- 3.28 Photograph by Tienie van Rooyen [13 August 2008]
- 3.29 Image by Author
- 3.30-42 All photographs by Author
- 3.43 Image by Author
- 3.44 Image by Author

## Chapter 4

- 4.1-16 All diagrams by group
- 4.17-20 All images by Author

## Chapter 5

- 5.1-5.5 Images: WOODE, D ed. 2003. Mutualpark West Campus. *Architect and Builder*, January/February, p24-33.
- 5.6 Image: DOBSEN, R & LEES, J. 2008. Intuitive process(es) towards responsive urban architecture. *Architecture*, January/February, p24
- 5.7 Image: DOBSEN, R & LEES, J. 2008. Intuitive process(es) towards responsive urban architecture. *Architecture*, January/February, p24
- 5.8-13 Photographs by Bennie Kunz
- 5.14 Image: [www.galinsky.com/buildings/waterloo/index.htm](http://www.galinsky.com/buildings/waterloo/index.htm) [Accessed 10 June 2008]
- 5.15 Image: [www.galinsky.com/buildings/waterloo/index.htm](http://www.galinsky.com/buildings/waterloo/index.htm) [Accessed 10 June 2008]
- 5.16 Image: WILLIAMS, H.A., 1994. End of the line. *Architectural Record*, June 1994, vol. 94, no.6, p90-7
- 5.17 Image: WILLIAMS, H.A., 1994. End of the line. *Architectural Record*, June 1994, vol. 94, no.6, p90-7
- 5.18 Image: <http://www.owl.net.rice.edu/~arch214/waterloo.pdf> [Accessed 10 June 2008]
- 5.19 Image: WILLIAMS, H.A., 1994. End of the line. *Architectural Record*, June 1994, vol. 94, no.6, p90-7
- 5.20 Image: WILLIAMS, H.A., 1994. End of the line. *Architectural Record*, June 1994, vol. 94, no.6, p90-7
- 5.21-25 CERVER, F. 2003. *The world of contemporary architecture*. Germany: Konemann, p722-723
- 5.26-30 CHAPMAN, T. 2007. *Architecture 07. The guide to the RIBA awards*. London: Merryl, p44-47
- 5.31-36 Images by Morne Pienaar, HolmJordaan Architects

## Chapter 6

All images by Author

## Chapter 7

- 7.1-8 Images by Author
- 7.9 Image: BALLARD BELL, V. 2006. *Materials for Architectural Design*. London: Laurence King, p245
- 7.10 Image: [www.smartglass.co.za-performance/data/insulvue/double-glazed](http://www.smartglass.co.za-performance/data/insulvue/double-glazed) [Accessed 22 September]
- 7.11 Image: SHITTICH, C & BIRKHAUSER, U. 2006. *In detail-Building skins*. Germany: Publishers for Architecture, p134-137
- 7.12 Image: [www.olderadio.com/archives/stations/LA/P6%20Cone%20&Wrap%20in%20place.JPG](http://www.olderadio.com/archives/stations/LA/P6%20Cone%20&Wrap%20in%20place.JPG) [Accessed 15 September 2008]
- 7.13 Image: [www.miko-sheeting.co.za/mht/product/range](http://www.miko-sheeting.co.za/mht/product/range) [26 September 2008]
- 7.14 Image: [www.spie.org/Images/Graphics/Newsroom/Imported/1047/1047\\_fig1.jpg](http://www.spie.org/Images/Graphics/Newsroom/Imported/1047/1047_fig1.jpg) [Accessed 29 September 2008]
- 7.15 Image by Author
- 7.16 Image: [www1.hunterdouglascontract.com/HDWeb/Cultures/en/Products/SolarControl/SunLouvers/Aerofins/Aerowing/](http://www1.hunterdouglascontract.com/HDWeb/Cultures/en/Products/SolarControl/SunLouvers/Aerofins/Aerowing/) [Accessed 12 September 2008]
- 7.17 Image by Author
- 7.18-20 Images: [www.medienfassade.com/fileadmin/media/pdf/ag4\\_Mediamesh\\_Illumesh\\_en.pdf](http://www.medienfassade.com/fileadmin/media/pdf/ag4_Mediamesh_Illumesh_en.pdf) [Accessed 4 October 2008]
- 7.21 Image by Author
- 7.22 Image by Author

## Chapter 8

All images by Author



PAGES

INTRODUCTION 01:00

THEORETICAL APPROACH 02:00

CONTEXT 03:00

URBAN FRAMEWORK 04:00

PRECEDENTS 05:00

DESIGN DEVELOPMENT 06:00

DESIGN CLARIFICATION 07:00

TECHNICAL INVESTIGATION 08:00

LIST OF SOURCES 09:00

APPENDICES 10:00