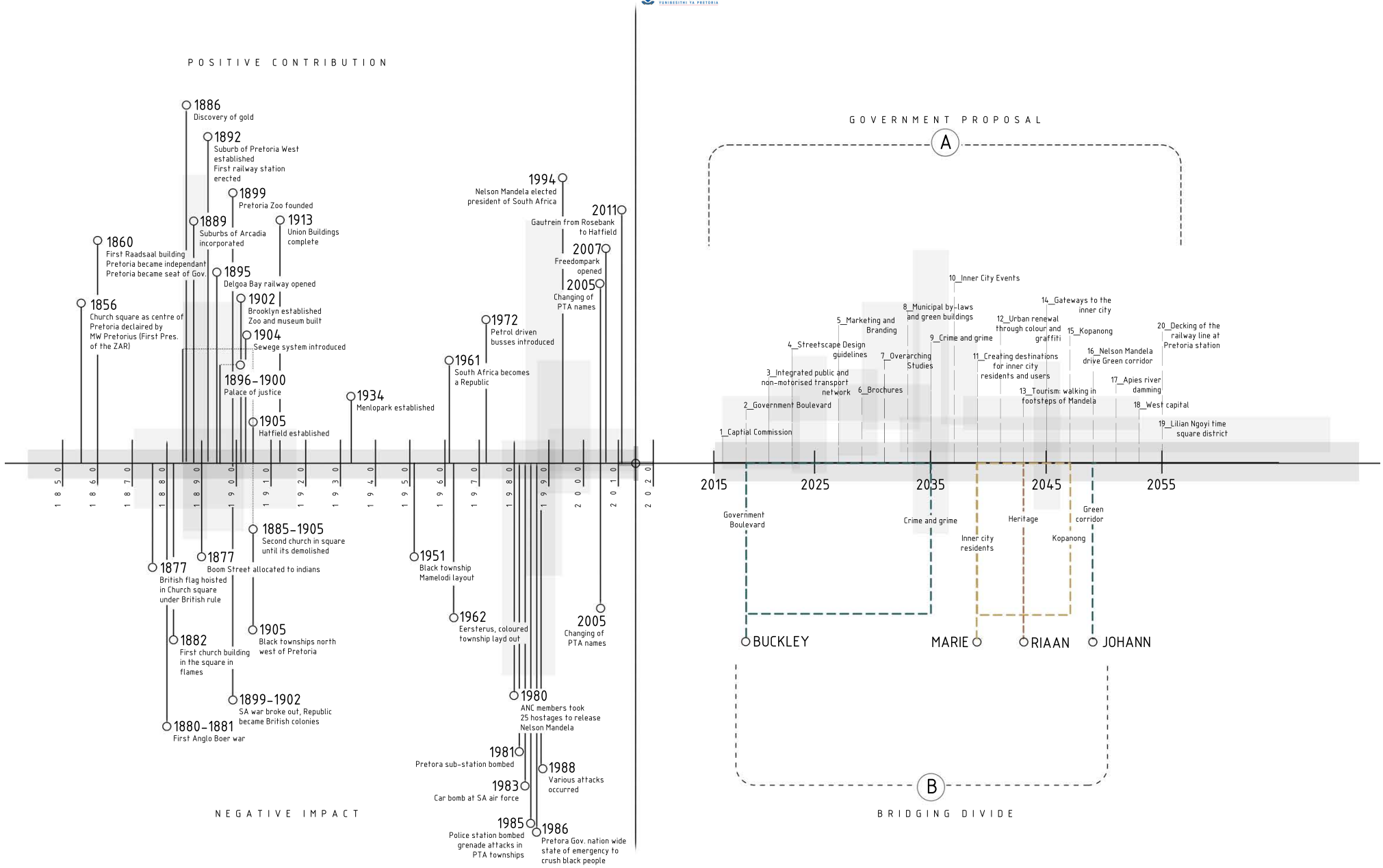
12 / APPENDIX

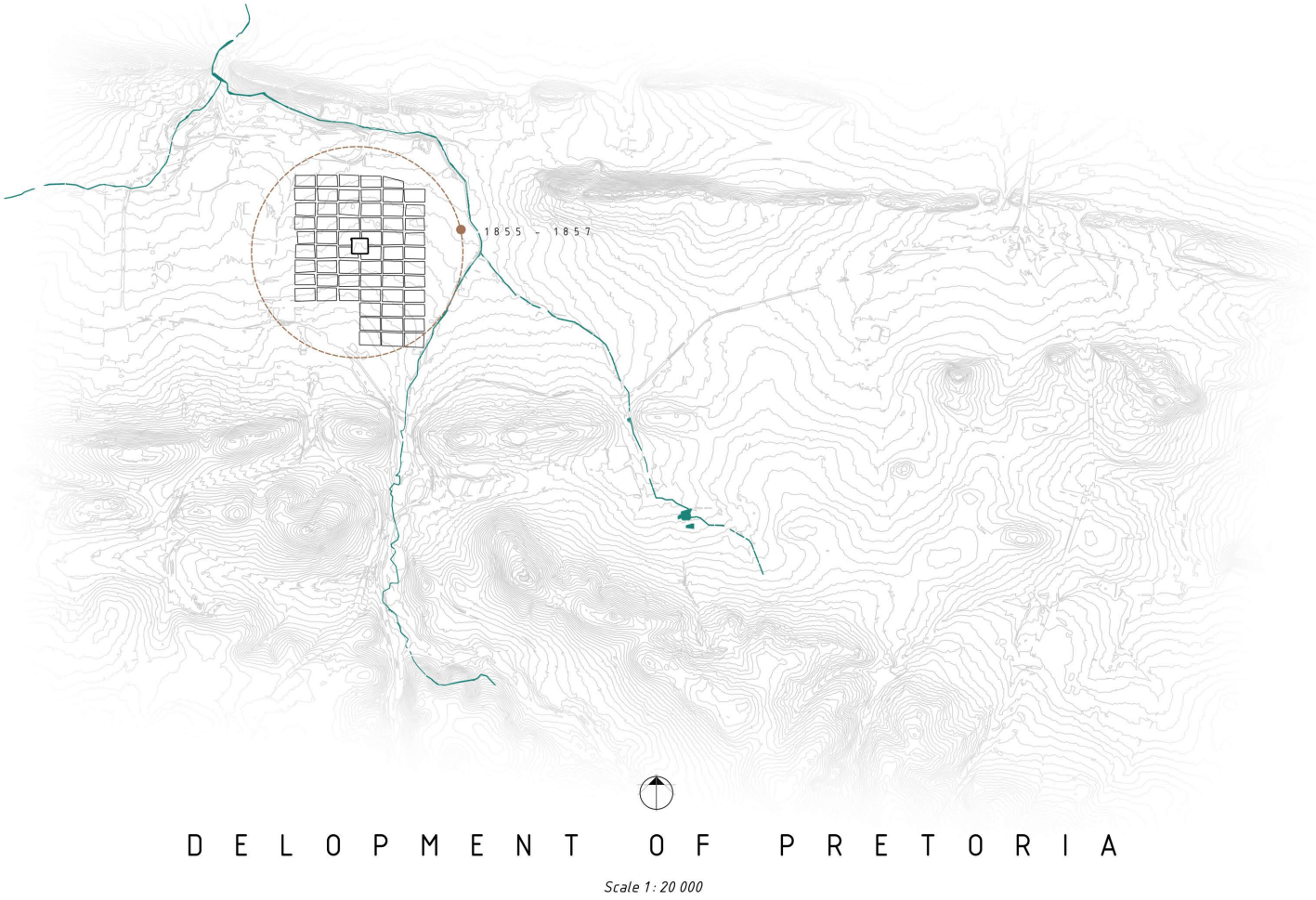
12.1 / GROUP PRESENTATION

The Focus of the Group framework was based on the development of the Tshwane's 2055 vision, and how this influences the growth of the city. To understand the future of Pretoria, one must first understand how it started and developed. This project only focuses on certain aspects of the development and therefore will not cover the entire history of Pretoria.

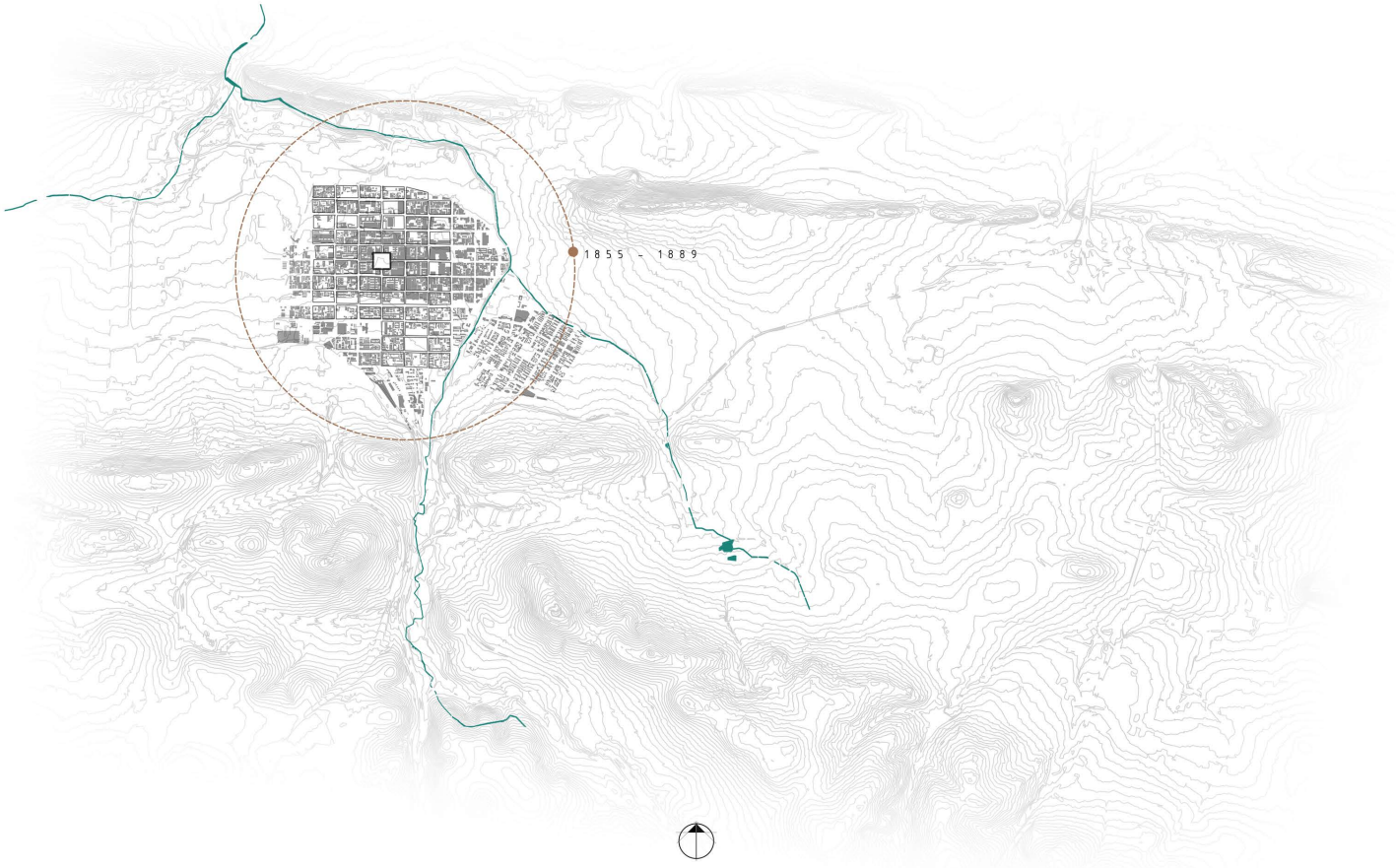
MAPPING

investigating the north south axis of the city(pretoria)

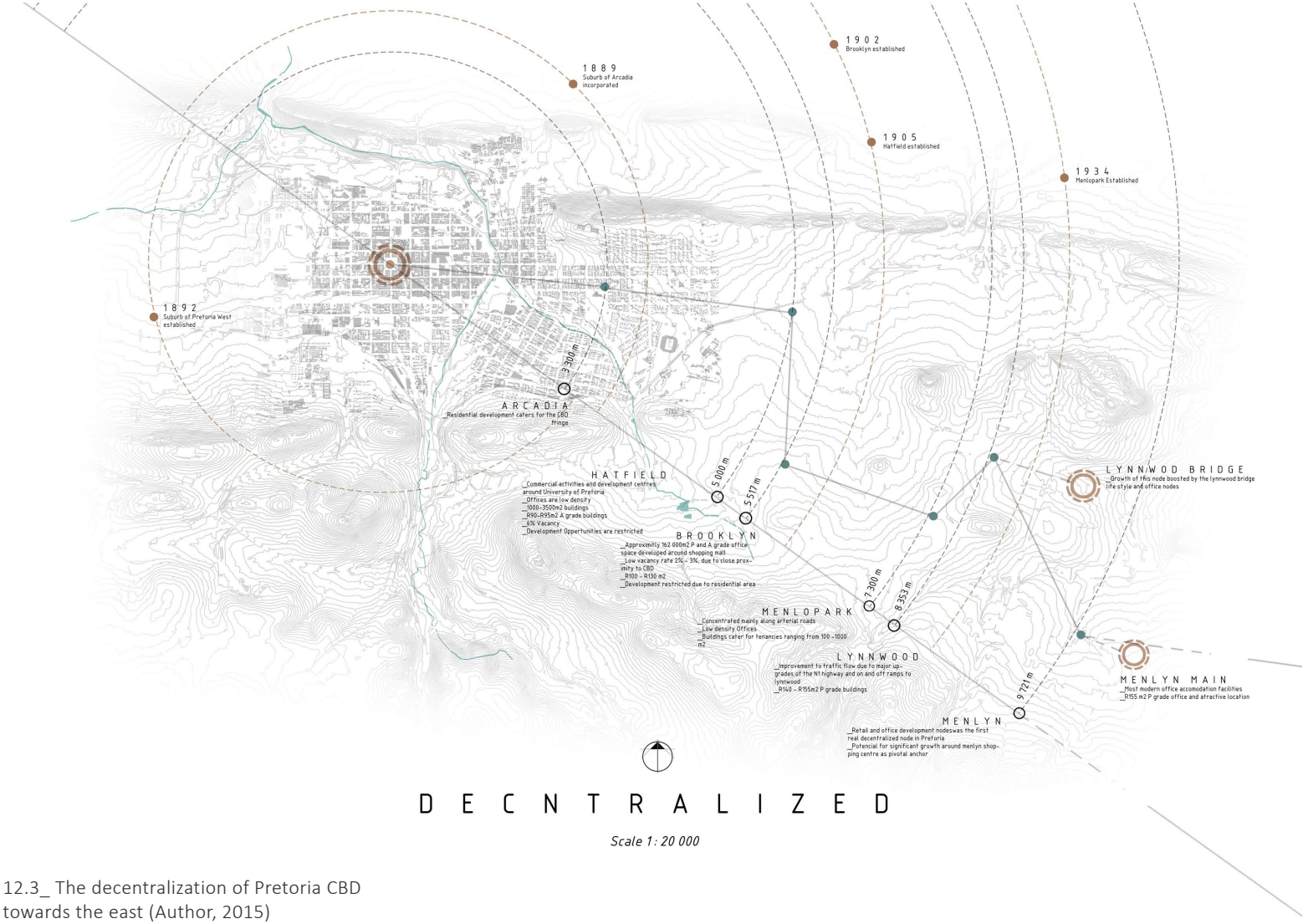




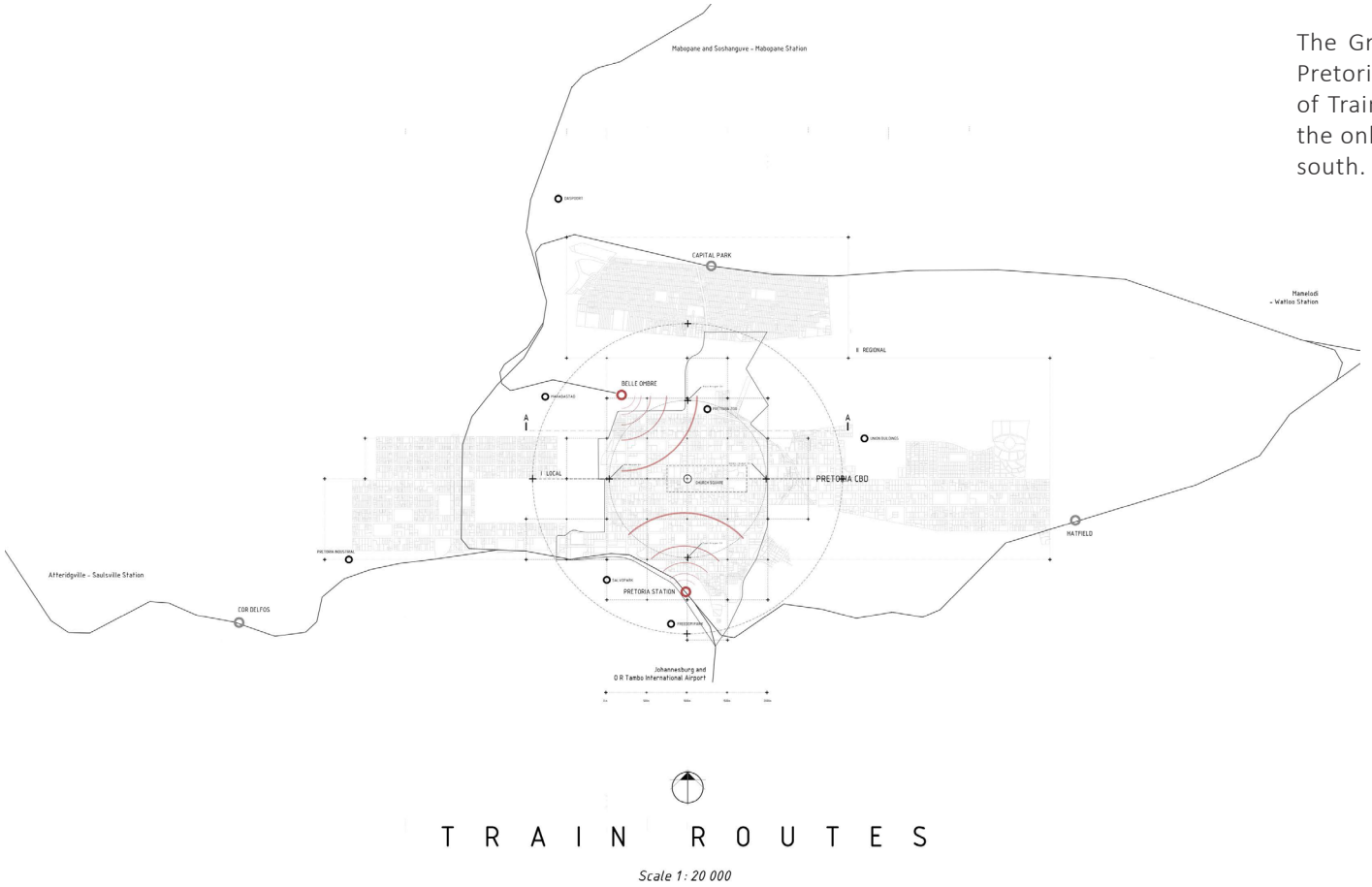
12.1_ The development of Pretoria from a central grid in the 1800 (Author, 2015)



12.2_ The development of Pretoria bridged the Apies river on the east (Author, 2015)



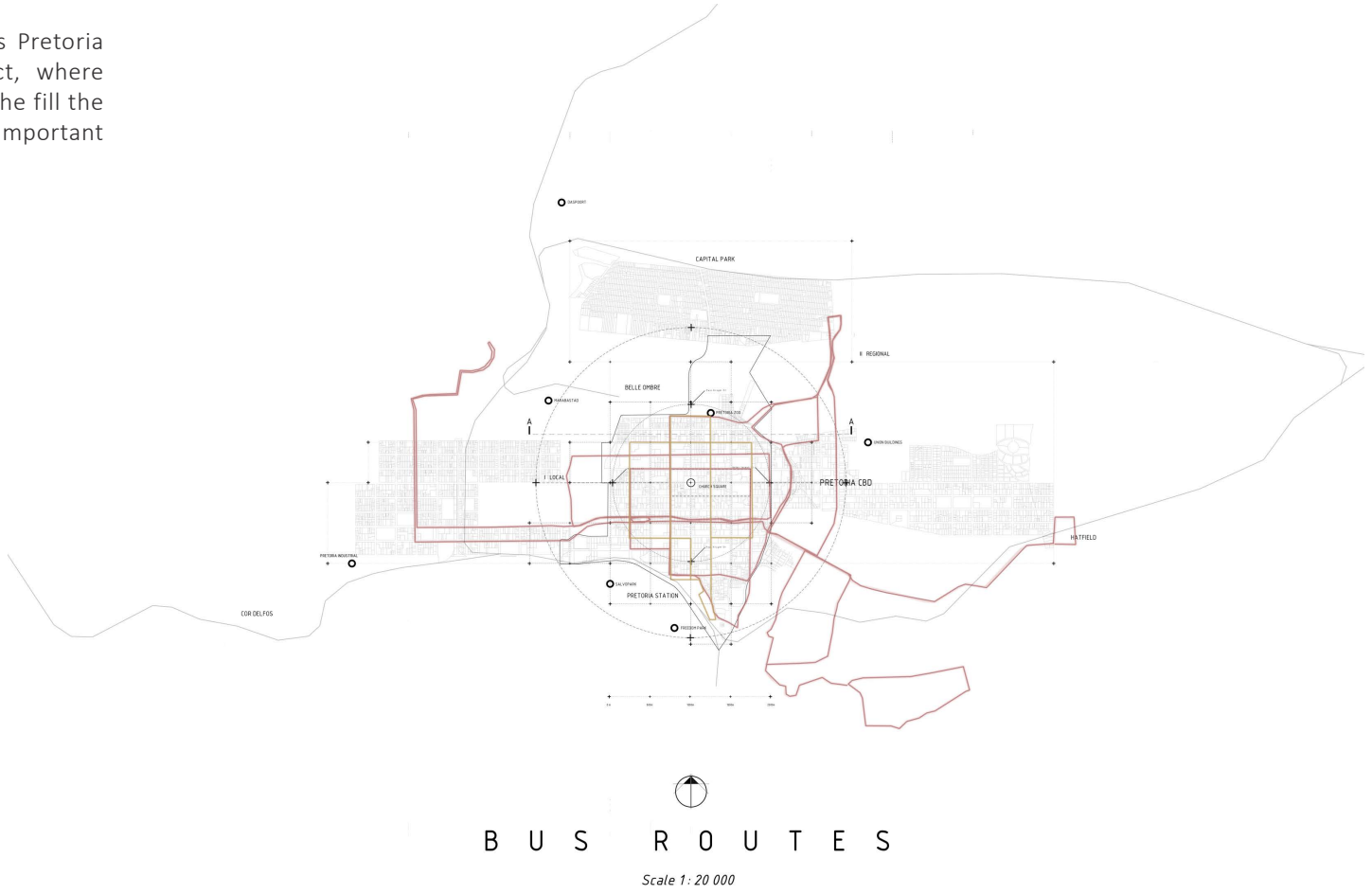
12.3_ The decentralization of Pretoria CBD towards the east (Author, 2015)



The Group then focused on the access in and out of Pretoria, and found that public transport in the form of Train stations and bus routes are very limiting, with the only access ftom the north (at Marabastad) and the south.

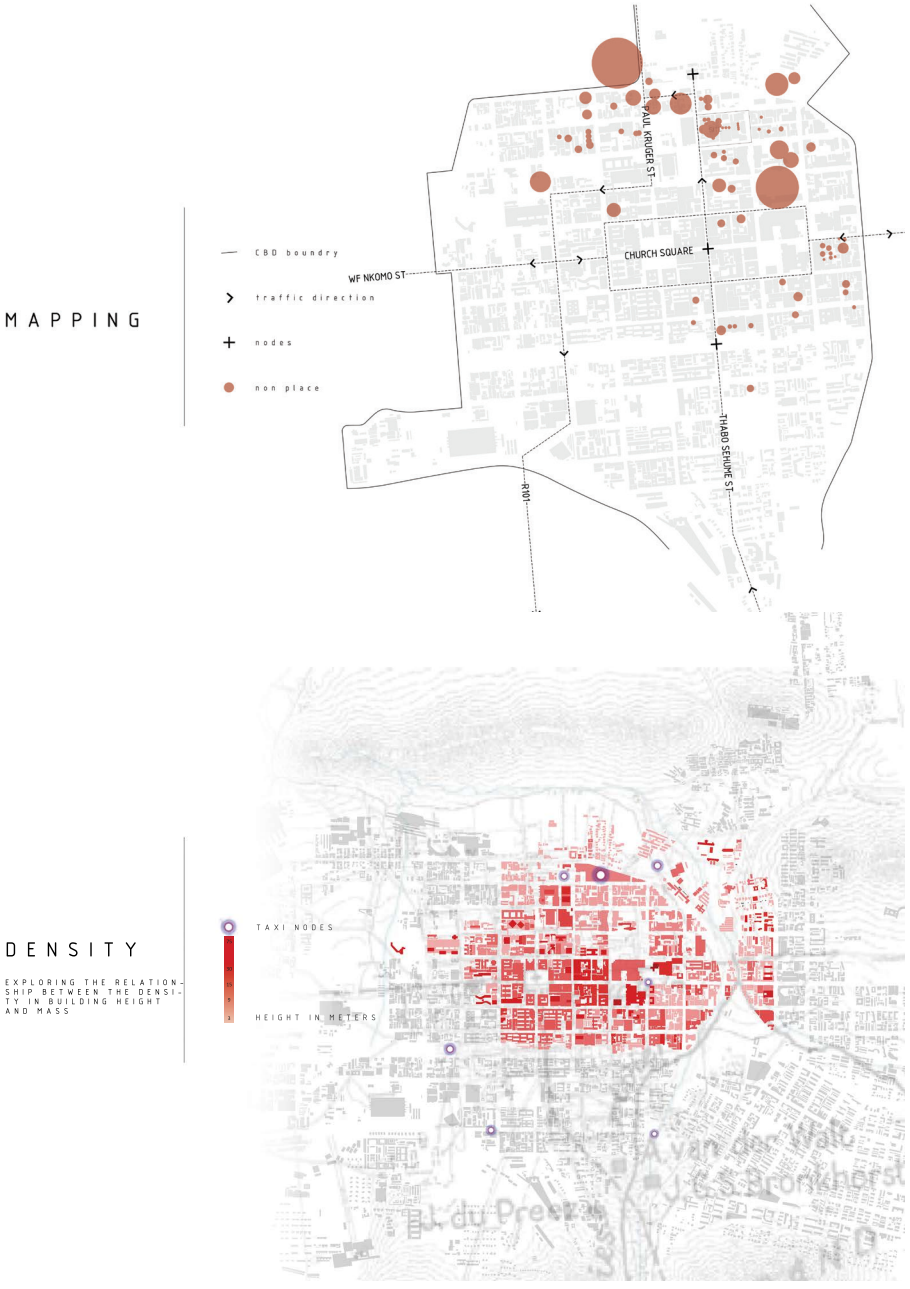
12.4_ Train routes access to Pretoria Central (Author, 2015)

The bus routes from the train station covers Pretoria CBD aswell as the outscirts of this district, where informal ways of transport is then relied on the fill the gaps. Therefore the informal transport is very important in this aspect.



12.5_ Gautrain busroutes aswell as Areyeng bus routes in and out of the city (Author, 2015)

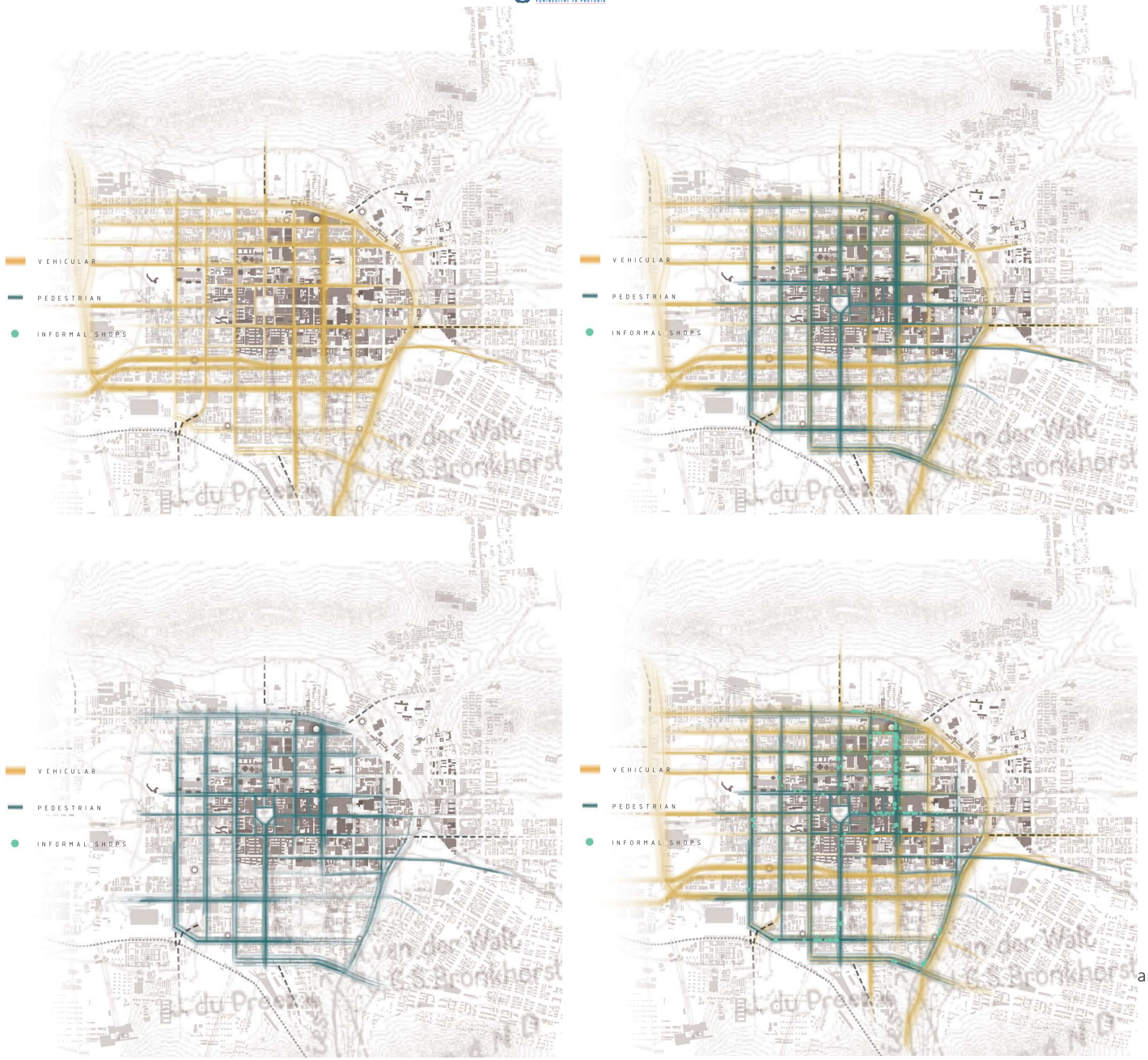
12.6_ Main streets on the grid of Pretoria entering the CBD (Author, 2015)



12.7_ Foucing on the North East Quadrant of Pretoria CBD, Density in building height (Author, 2015)

MOVEMENT

INVESTIGATING HOW CITY PLANNING AND SHAPE AS INFLUENCED MOVEMENT DENSITY IN THE CITY



MOVEMENT

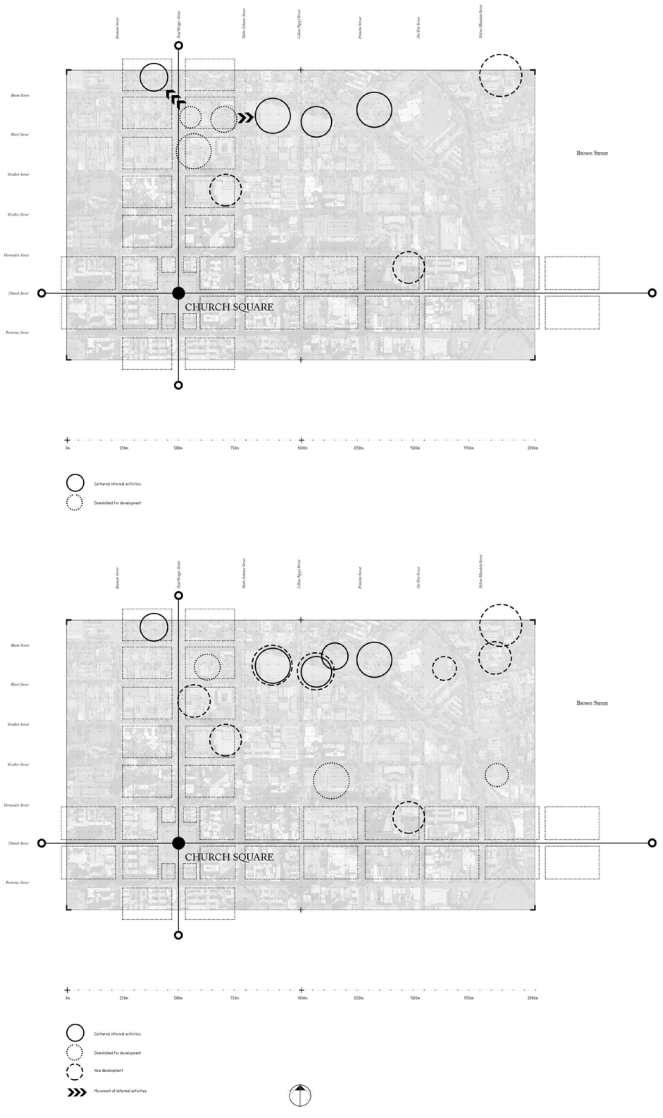
INVESTIGATING HOW CITY PLANNING AND SHAPE AS INFLUENCED MOVEMENT DENSITY IN THE CITY

12.8_ Movement in and around the CBD (Author, 2015)

F R A M E W O R K S T R U C T U R E

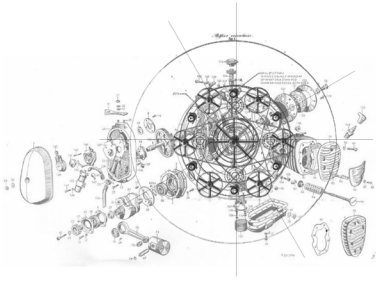
Scale 1 : 5000

12.9_ The following diagrams explain how the informal condition in Pretoria keeps shifting, pushing them towards the eastern border of the CBD (Author, 2015)

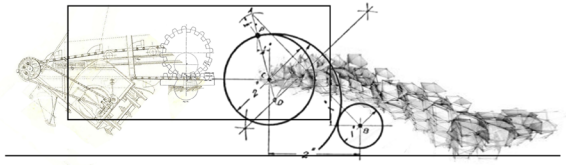


F R A M E W O R K S T R U C T U R E

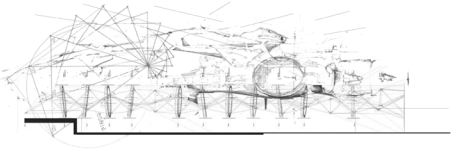
Scale 1 : 5000



HARNASS



ASSIMILATE

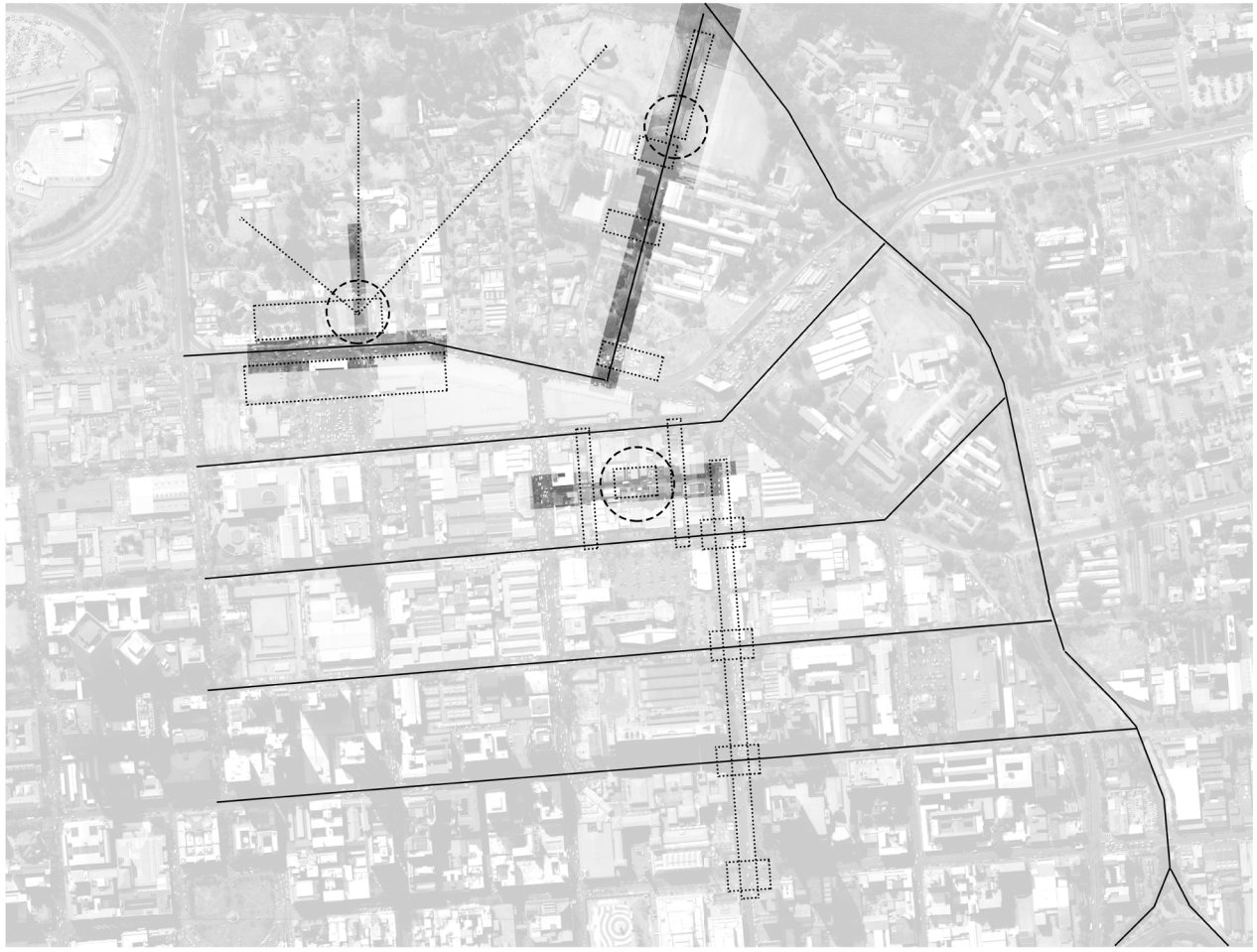


RECOGNOTION

U R B A N I N T E N T I O N S

Scale 1 : 2000

12.10_ Concept diagrams of the group framework intentions (Author, 2015)



U R B A N I N T E N T I O N S

Scale 1 : 2000

12.11_Abstract diagrams explaining framework intentions (Author, 2015)

"HARNESS"

Site pLan
Buckley Thomspon

12.12_ Harnessing the city's energy (Author, 2015)

"ASSIMILATION"

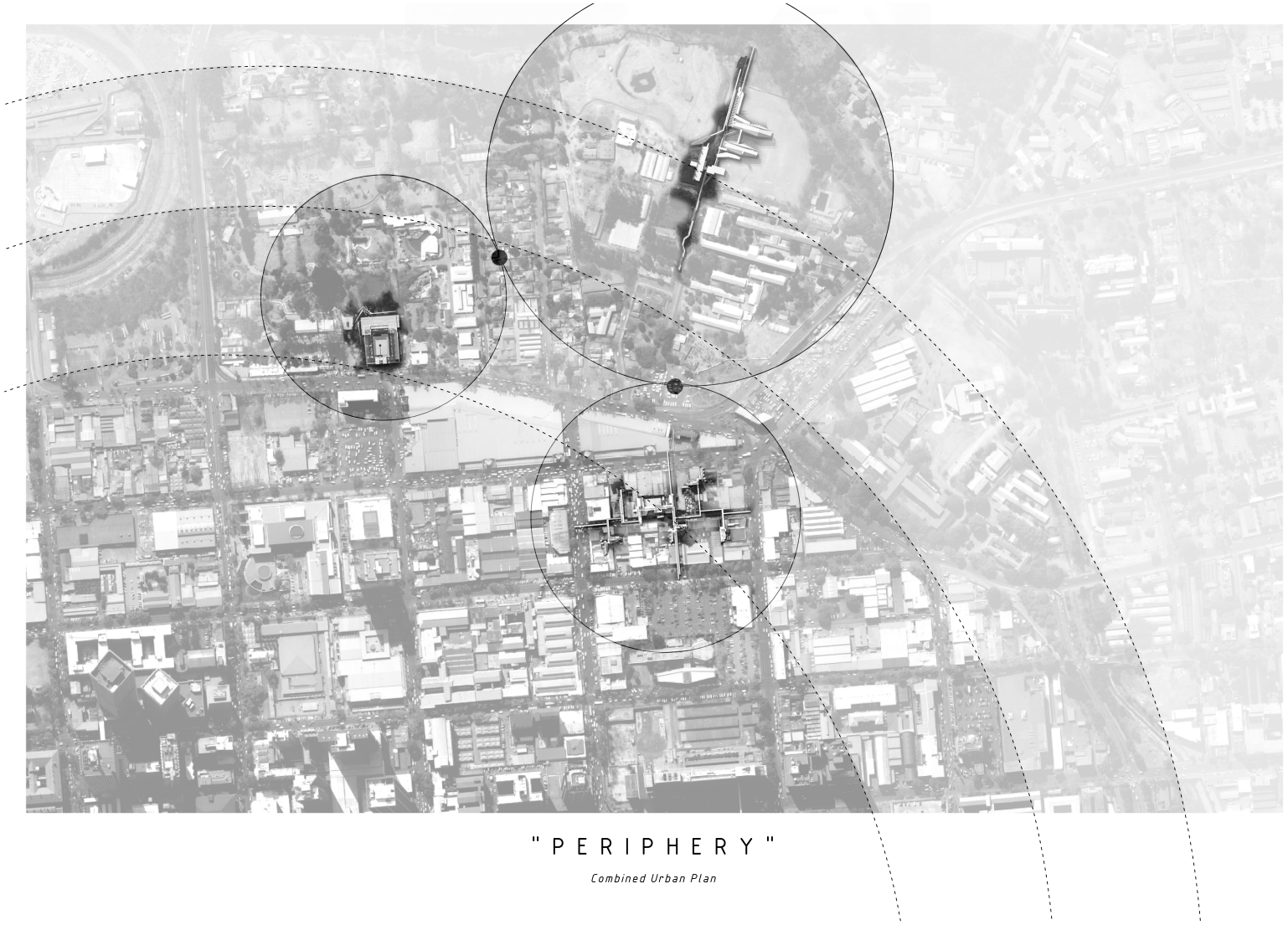
Site Plan
Riaan Hollenbach

12.13_ Assimilating the energy (Author, 2015)

"RECOGNITION"

Site Plan
Johann Boonzaaier

12.14_ Recognizing the lost energies
(Author, 2015)



12.15_ Locality plan of Group Framework (Author, 2015)

13 / REFERENCES

Boundless. (2015). Industrialization and the Environment. [online] Available at: https://www.boundless.com/u-s-history/textbooks/boundless-u-s-history-textbook/the-market-revolution-1815-1840-13/the-industrial-revolution-110/industrialization-and-the-environment-596-9029/ [Accessed 10 Oct. 2015].
Brand, S. (1994). How buildings learn. New York, NY: Viking.

Cole, R. (2012). Embracing Holism, Engaging Complexity, & Accepting Uncertainty. In: Beyond LEED Regenerative Design Symposium. Texas: The University of Texas at Austin School of Architecture.

Company, J. (2013). Sharp End of the Green Stick: Interstitial – Between Architecture and Landscape. [Online] Restorativedesign.blogspot.com. Available at: http://restorativedesign.blogspot.com/2013/03/interstitial-between-architecture-and.html. [Accessed 10 Mar. 2015].

Culin, J. (2015). lepidopteran | insect. [online] Encyclopedia Britannica. Available at: http://www.britannica.com/animal/lepidopteran [Accessed 26 Oct. 2015].

Daily, G. (1997). Nature's services. Washington, DC: Island Press.
Holzsch

De Villiers, R. (1989). Pretoria se argitektuur deur die oe van kunstenaars. Architecture SA. 5, pp. 19-22

Du Plessis, C. (2006). Thinking about the day after tomorrow. New perspectives on sustainable Building. In: Rethinking Sustainable Construction. Pretoria: CSIR.
Environment Insider, (2014). Impact of Industrialization on the Environment. [online] Available at: http://environmentinsider.com/impact-industrialization-environment/ [Accessed 10 Oct. 2015].

Esparza, A. and McPherson, G. (2009). The planner's guide to natural resource conservation. New York: Springer.

Falkenmark, M., Jägerskog, A., Schneider, K. (2014). Overcoming the land–water disconnects in water-scarce regions: time for IWRM to go contemporary. International Journal of Water Resources Development, 30 (3), pp. 391-408.

Fletcher, B. (1961). A history of architecture on the comparative method. New York: Scribner.

Freeman, C., Clark, R, D., Van Heezik, Y. (2011). Creating Ecologically Based Land Use and Habitat Maps Quickly and Cheaply to Support Conservation Planning at Local Scales: A New Zealand Example. Geographic Research. 49 (1), pp. 99-111.

Gascoigne, B. (n.d). HISTORY OF ARCHITECTURE. [Online] Available at: http://www.historyworld.net/wrldhis/PlainTextHistories.asp?groupid=1549&HistoryID=ab27&gtrack=pthc [Accessed 12 May 2015].

Gressitt, J. (2015). coleopteran | insect. [online] Encyclopedia Britannica. Available at: http://www.britannica.com/animal/beetle [Accessed 26 Oct. 2015].

Hadley, D. (2015). Habits and Traits of Butterflies and Moths. [online] About.com Education. Available at: http://insects.about.com/od/butterfliesmoths/p/char_lepidopter.htm [Accessed 26 Oct. 2015].

Hadley, D. (2015). Habits and Traits of Ants, Bees, and Wasps. [online] About.com Education. Available at: http://insects.about.com/od/antsbeeswasps/p/char_hymenopter.htm [Accessed 26 Oct. 2015].

Hadley, D. (2015). Habits and Traits of Beetles, Order Coleoptera. [online] About.com Education. Available at: http://insects.about.com/od/beetles/p/char_coleoptera.htm [Accessed 26 Oct. 2015].

Hadley, D. (2015). Order Diptera - Characteristics of True Flies. [online] About.com Education. Available at: http://insects.about.com/od/flies/p/char_diptera.htm [Accessed 26 Oct. 2015].

Joffe, P. (2001). Creative gardening with indigenous plants. Pretoria: Briza.

John, G., Clements-Croome, D., Jeronimidis, G. (2005). Sustainable building solutions: a review of lessons from the natural world. Building and Environment, 40 (3), pp. 319-328.

Jordaan, G. (1989). Pretoria as 'urbs quadrate'. Architecture SA. 5, pp. 26-29

Lindauer, M. (2015). hymenopteran | insect. [online] Encyclopedia Britannica. Available at: http://www.britannica.com/animal/hymenopteran [Accessed 26 Oct. 2015].

Littman, J. (2009). Regenerative Architecture: A Pathway Beyond Sustainability. Masters Theses. University of Massachusetts.

Mang, P, & Reed, B. (2012). Regenerative Development and Design. Encyclopedia Sustainability Science & Technology.

Mayes, D. (2011). Insect pollinators within cotton fields of small-scale farms in Mwachisompola, Zambia and development of an educational manual.

Oldroyd, H. (2015). dipteran | insect. [online] Encyclopedia Britannica. Available at: http://www.britannica.com/animal/dipteran [Accessed 26 Oct. 2015].
Österblom, H., Folke, C. (2013). Emergence of Global Adaptive Governance for Stewardship of Regional Marine Resources. Ecology and Society, 18 (2).

Pahl-Wostl, C., Arthington, A., Bogardi, J., Bunn, S., Hoff, H., Lebel, L., Nikitina, E., Palmer, M., Poff, L., Richards, K., Schlüter, M., Schulze, R., St-Hilaire, A., Tharme, R., Tockner, K., Tsegai, D. (2013). Environmental flows and water governance: managing sustainable water uses. Current Opinion in Environmental Sustainability, 5 (3-4), pp. 341-351.

Pawlyn, M. (2011). Biomimicry in architecture. [London, UK]: Riba Publishing.

Peres, E., Bak[r]er, A., Du Plessis, C. (2015). Architecture for life: Exploring Regenerative and Resilience thinking. Architecture SA, 71 (1), pp. 40-45.

Reed, B (dir). (2010). *From Sustainability through Tegeneration: Whole and Living Systems Design.* [Video Recording]. Healthy Schools Conference: Media changing Media.

Reed, B. (2011). From Sustainability through Regeneration: Whole and Living System Design. (2011). [Video] Healthy Schools Conference: Media Changing Media, LLC.

Sloterdijk, P. and Mannoni, O. (2005). Le palais de cristal. Médium, 5(4), p.3.

Smith, M., Whitelegg, J. and Williams, N. (1998). Greening the built environment. London: Earthscan Publications.

Speight, J. (2015). Handbook of alternative fuel technologies, Liquid Fuels from Natural Gas. Boca Raton: CRC Press.

Uh, A., Dudenhöffer, J., Tscharntke, T. (2012). Landscapes with wild bee habitats enhance pollination, fruit set and yield of sweet cherry. Biological Conservation, 153, pp. 101-107.

Vidler, A. (2010). What Happened to Ecology? John McHale and the Bucky Fuller Revival. Architectural Design, 80 (6), pp. 24-33.

Wells, M. Yeang, K. (2010). Biodiversity target as the basis for green design. Yeang's Eco-File, pp. 130-133.

Westley, F., Tjornbo, O., Schultz, L., Olsson, P., Folke, C., Crona, B., Bodin, Ö. (2013). A Theory of Transformative Agency in Linked Social-Ecological Systems. Ecology and Society, 18 (3).

Wiek, A., Withycombe, L., Redman, C. and Mills, S. (2011). Moving Forward on Competence in Sustainability Research and Problem Solving. Environment: Science and Policy for Sustainable Development, 53 (2), pp. 3-13.

Yeang, K. (2008). Ecomasterplanning. Yeang's Eco-File, pp 128-131