CHAPTER 1
Fig. 0.1 Theme Image (Author, 2017)
Fig. 1.1 Industrial Food Production Theme (Author, 2017)
Fig. 1.2 Pretoria Figure Ground (Author, 2017)
Fig. 1.3 Development of Industrial Belt, Shown in Red (Author, 2017)
Fig. 1.4 Precinct (Urban Vision Group, 2017)
Fig. 1.5 Urban Corridors (Author, 2017)
Fig. 1.6 West Capital Development (Author, 2017)
Fig. 1.7 Urban Usage (Author, 2017)
Fig. 1.8 Urban Analysis Graph (Author, 2017)
Fig. 1.9 Urban morphology sketch (Author, 2017)
Fig. 1.10 Pretoria Rapid Transit Systems (Author, 2017)
Fig. 1.11 Pretoria West Urban Heat Island effect (Author, 2017)
Fig. 1.12 Pretoria Income Intensity (Author, 2017)
Fig. 1.13 Pretoria Urban Heat Island Effect (Author, 2017)
Fig. 1.14 Theoretical Considerations (Author, 2017)

CHAPTER 2
Fig. 2.1 Site Infrastructure Collage (Author, 2017)
Fig. 2.2 Patterns on Mapungupwe Artefacts: Tiley-Nel, S. (2014). A Technological study and manufacture of ceramic vessels from K2 and Mapungubwe Hill, South Africa. Magister Artium (Masters). University of Pretoria.
Fig. 2.5 Speed of a motorcycle: Balla, G, 1913. Speed of a Motorcycle, Oil on Canvas. Available: https://futurism-movement.weebly.com/giacomo-balla.html [Accessed: 04 March 2017]
Fig. 2.6 Ford motor company factory: Weber, A. (2013). The Moving Assembly Line Turns 100. Several mega-forces were behind Ford Motor Co.’s engineering milestone. Assembly. Available at: https://www.assemblymag.com/articles/91581-the-moving-assembly-line-turns-100 [Accessed 4 May 2017]
Fig. 2.7 Ford’s moving Production line: Weber, A. 2013. The Moving Assembly Line Turns 100. Several mega-forces were behind Ford Motor Co.’s engineering milestone. Assembly. Available at: https://www.assemblymag.com/articles/91581-the-moving-assembly-line-turns-100 [Accessed 4 May 2017]


Fig. 2.21 Informal Food Collage (Collated by Author) Source images for collage:
Fig. 3.1 Precinct Location Within South Africa (Urban Vision Group)
Fig. 3.2 Precinct location within Pretoria (Urban Vision Group)
Fig. 3.3 Current day Pretoria West Aerial Photo (Google Earth, 2017)
Fig. 3.4 Pretoria West Historic Industrial Development Photo, (Tshwane GIS, c., 1955)
Fig. 3.5 Precinct Development (Urban Vision Group)
Fig. 3.6 Pretoria West Density (Author, Google earth, 2017)
Fig. 3.7 Sunnyside Density (Author, Google earth, 2017)
Fig. 3.8 President Burger St. Streetscape (Author, 2017)
Fig. 3.9 Carl St. Streetscape (Author, 2017)
Fig. 3.10 Urban Sustainability Rating (Author, 2017)
Fig. 3.11 President Burger Sustainability Rating (Author, 2017)
Fig. 3.12 President Burger Streetscape (Author, 2017)
Fig. 3.13 President Burger Street Elevation (Author, 2017)
Fig. 3.14 President Burger Street Urban Sustainability Rating - North (Author, 2017)
Fig. 3.15 President Burger Street Urban Sustainability Rating - South (Author, 2017)
Fig. 3.16: West Capital Development (Author, 2017)
Fig. 3.17: Urban Density (Urban Vision Group, 2017)
Fig. 3.18: Urban Scale Development sketches (Author, 2017)
Fig. 3.19 Informal production corridor through Pretoria Showgrounds (Author, 2017)
Fig. 3.20 Early vision for President Burger street (Author, 2017)

Fig. 3.21 2 Brothers Square Design (Author, 2017)

Fig. 3.22 Tshwane Market/Marabastad Connection (Author, 2017)

Fig. 3.23 Carl Street Bridge (Author, 2017)

Fig. 3.24 Meat Market Connection (Author, 2017)

Fig. 3.25 Church Street Commerce (Author, 2017)

Fig. 3.26: Progression of Productive spaces along Urban Corridor (Author, 2017)

Fig. 3.27 President Burger St. Proposed productive corridor (Author, 2017)

Fig. 3.28: Figure ground study of Pretoria West Showgrounds as Public Space (Author, 2017)

Fig. 3.29: Food Production Corridor Vision (Author, 2017)

Fig. 3.30 Initial Envisioning of President Burger Street as a Connective Route (Author, 2017)

Fig. 2.31 President burger Existing Street Elevation (Author, 2017)

CHAPTER 4

Fig. 4.1 Existing Grain Drop off Area (Urban Vision Group, 2017)

Fig. 4.2 End Production line (Urban Vision Group, 2017)

Fig. 4.3 Fresh Produce Being sold at the train station (Urban Vision Group, 2017)

Fig. 4.4 Fresh produce being re packaged and loaded onto the train (Urban Vision Group, 2017)

Fig. 4.5 On Site Grain Storing Silos (Urban Vision Group, 2017)

Fig 4.6: New York Highline Areal view:

Fig 4.7: New York Highline Linear Park:

Fig 4.8: New York highline, Linear park:

Fig 4.9: Conceptual Sketch:

Fig 4.10: Added movement between existing structures and new roof:

Fig 4.11: Occupying the space between the existing and the new:

Fig. 4.12: Current Milling Site (Author, 2017)

Fig. 4.13: Current Milling Site usage diagram (Author, 2017)

Fig. 4.14: Current Milling Site usage diagram (Author, 2017)

Fig. 4.15 Industrial Flour Milling Process:
CHAPTER 5
Fig. 5.1 View from Raised Train Platform (Author, 2017)

Fig. 5.2 Site Photo of Original Facade Construction (Author, 2017)

Fig. 5.3 1968 Areal photo of the milling site: Supreme Flour, Undated. Available: https://supremeflour.co.za/why-supreme/heritage/2017 [Accessed: 03 May 2017]

Fig. 5.4 Current Milling Site (Google Earth, 2017)

Fig. 5.5 Photo of original milling structure: Supreme Flour, Undated. Available: https://supremeflour.co.za/why-supreme/heritage/2017 [Accessed: 03 May 2017]

Fig. 5.6 Additive Extension to Original Structure (Author, 2017)

Fig. 5.7 Admin block (Google Street View, 2017)

Fig. 5.8 Grain Silos with Overhead Pipes Leading to the Oil Refinement Plant (Urban Vision Group, 2017)

Fig. 5.9 Heritage Value of Structures (Author, 2017)

Fig. 5.10 Steel Structure as Tectonic Addition (Urban Vision Group, 2017)

Fig. 5.11 Steel Construction as Tectonic Addition (Urban Vision Group, 2017)

Fig. 5.12 Diagram of Introduced Spaces (Author, 2017)

Fig. 5.13 Site Photo Collage (Author, 2017)

Fig. 5.14 Programmed Sketch Plan (Author, 2017)

Fig. 5.15 Programmed Sketch Plan (Author, 2017)

CHAPTER 6
Fig. 6.1 Concept Development Sketches (Author, 2017)

Fig. 6.2 Extending the facade to allow program to spill out (Author, 2017)

Fig. 6.3 Adjacent Activities (Author, 2017)

Fig. 6.4 Site design for urban release along spine (Author, 2017)

Fig. 6.5 included Activities (Author, 2017)

Fig. 6.6 Extended Activities (Author, 2017)

Fig. 6.7 Progressing Through Activities (Author, 2017)

Fig. 6.8 Progressing Through Spaces (Author, 2017)

Fig. 6.9 An Ordered and Composed Sketch (Author, 2017)

Fig. 6.10 Overhead Plane Connecting Various Individual Elements Below
CHAPTER 7

Fig. 7.1 Evolution of Elevational Composition (Author, 2017)

Fig. 7.2 Early Spatial Organization of and Interactions (Author, 2017)

Fig. 7.3 Development of Distinct Circulation Types (Author, 2017)

Fig. 7.5 Grouping of Functions and Separation of Circulation Paths (Author, 2017)

Fig. 7.6 Development Sketch Plans of Spatial and Organization and Composition (Author, 2017)

Fig. 7.7 Spatial Development Models (Author, 2017)

Fig. 7.8 Development of production corridor (Author, 2017)

Fig. 7.9 Occupying the space between process flows

Fig. 7.10 Allowing production lines into shared spaces (Author, 2017)

Fig. 7.11 Slowing down the user’s progression through spaces (Author, 2017)

Fig. 7.12 Draping the Market Between Nodes (Author, 2017)

Fig. 7.13 Dividing the Market into Sections (Author, 2017)

Fig. 7.14 Returning to Direct Linear Process Routes (Author, 2017)

Fig. 7.15 Direct Transposing of Facade (Author, 2017)

Fig. 7.16 Stepped Extrusions (Author, 2017)

Fig. 7.17 Tectonic Insertions Between Old and New (Author, 2017)

Fig. 7.18 Legible Linear Circulation and Processes (Author, 2017)

Fig. 7.19 Informal Production on Bridge Over Service Road (Author, 2017)

Fig. 7.20 Crossing Over the Railway Lines (Author, 2017)

Fig. 7.21 Access to Train Platform from Service Road and Market (Author, 2017)

Fig. 7.22 Connecting Nodes of Production (Author, 2017)

Fig. 7.23 Vehicular Delivery Route Indicated in Red (Author, 2017)

Fig. 7.24 Revised Connective Route (Author, 2017)

Fig. 7.25 Angular Connections between formal and informal (Author, 2017)

Fig. 7.26 Horizontal Order and Alignment Between Market and Existing Building (Author, 2017)

Fig. 7.27 Reduced Tectonic Prominence (Author, 2017)

Fig. 7.28 Informal connection to new facade (Author, 2017)

Fig. 7.29 Continuous Raised Market (Author, 2017)

Fig. 7.30 Horizontal Penetration of Market (Author, 2017)

Fig. 7.31 Explorative Models (Author, 2017)

Fig. 7.32 Explorative Models (Author, 2017)

Fig. 7.33 Explorative Models (Author, 2017)

Fig. 7.34 Explorative Models (Author, 2017)

Fig. 7.35 Explorative Models (Author, 2017)
CHAPTER 8
Fig. 8.1 Technical sketches (Author, 2017)
Fig. 8.2 Solar Study (Author, 2017)
Fig. 8.3 Section (Author, 2017)
Fig. 8.4 Ventilation Iterations (Energy 2D by Author, 2017)
Fig. 8.5 Ventilation Graphs (Author, 2017)
Fig. 8.6 Ventilation Iterations (Energy 2D by Author, 2017)
Fig. 8.7 Ventilation Graphs (Author, 2017)
Fig. 8.8 Solar Study (Revit 2016 by Author)
Fig. 8.9 Sun Path (Revit 2016 by Author)
Fig. 8.10 Greenstar Rating Credit Categories (GBCSA, 2017)
Fig. 8.11 Climate (Revit 2016 by Author)
Fig. 8.12 Climate (Revit 2016 by Author)
Fig. 8.13 Solar Study (Revit 2016 by Author)
Fig. 8.14 Sketch Plan (Author, 2017)
Fig. 8.15 Ground Floor Plan (Author, 2017)
Fig. 8.16 Roof Plan (Author, 2017)
Fig. 8.17 Train Station Plans (Author, 2017)
Fig. 8.18 Shading Design (Revit 2016 by Author, 2017)
Fig. 8.19 Systems Design (Author, 2017)
Fig. 8.20 Sections (Author, 2017)
Fig. 8.21 Elevations (Author, 2017)
Fig. 8.22 Rendered Sections (Author, 2017)
Fig. 8.23 Site Model (Author, 2017)
Fig. 8.24 Site Model (Author, 2017)
Fig. 8.25 Site Model (Author, 2017)
Fig. 8.26 Pretoria Figure Model (Author, 2017)
CHAPTER 9
Fig. 9.1 Design in Context (Author, 2017)
Fig. 9.2 Internal Walkway Render (Author, 2017)
Fig. 9.3 Northern Birds Eye View (Author, 2017)
Fig. 9.4 Southern Birds Eye View (Author, 2017)
Fig. 9.5 Southern Birds Eye View Night Render (Author, 2017)
Fig. 9.6 Grain Market Courtyard View (Author, 2017)
Fig. 9.7 Internal Train Station View (Author, 2017)
Fig. 9.8 Internal View (Author, 2017)
Fig. 9.9 Southern View Development Render (Author, 2017)
Fig. 9.10 Grain Market View (Author, 2017)
Fig. 9.11 Grain Market View Night Render (Author, 2017)
Fig. 9.12 Night Render of Initial Train Station Design (Author, 2017)
BIBLIOGRAPHY:


- Komarzynska-Swieściak, E. 2013. New urban contexts for architecture. Infrastructure zone as platform for new kind of public space. Poland, Wroclaw University of Technology.


South African Heritage Resources Act 25 of 1999 (SAHRA)


