



TECHNE [TECHNICAL INVESTIGATION]

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DESIGN PROGRESSION

Leading on from the design exploration component, the conceptualisation of form and place begane to take shape. The initial stage of site development led swiflty into the manipulation of form and detail in the creation of an arhictecture that challenged, beyond form, the qualitative nature of the site in an attempt to unearth a hidden gem hidden from any public realm.

Architectural Intentinon

The creation of a socially interactive architecture that integrates concepts of technological interchangeability with social participation as innovative and egalitarian alternatives. Responding to the geopolitical and cultural slippage between the current urban condition and urban responsiveness, the design seeks to define a catalytic precinct in the heart of the city. Using principles of recalibration and composition respondent to the buildings located on site, an architectural intervention and its associated infrastructure is defined, containing at the core the key principles of a truly recalibrated urban form and architecture.

In essence, the building will be a university of streets linking the the user with the building and site through the design of a non-hierarchical glass box like structure, that captivates and inspires users passing through the precinct on a daily basis.

Tectonic Intention

"What a sofa dictates can be regarded as the sum of what those responsible for it existence have to offer... The concept 'bench' is maintained by a series of associations which are so powerful that the user has little chance of seeing beyond these associations to pick out what they need most at that moment and that may well be a table rather than a bench... If the response to this first tentative and as yet non-commital gesture was not displeasing, then both parties can successively assume more permanent positions, always in keeping with the degree of commitment or non-commitment that each wants" Hertzberger, 1991.

Leading on from this, the architectural and tectonic intention serve to increase functionality of an architectural design by consistently taking account of the void space. The habitable space between things represents a shift in attention from the official to the informal, to where the ordinary day-to-day lives are led, and that means in the margins between the established meanings of explicit function.

In essence, one component houses multiple fucntions that serve the void. Roof becomes wall becomes floor becomes seating. Serving as both space defining elements and place making contributors, that house multiple functions, the tectonics serve to define the architecture and manipulate void



DESIGN PROGRESSION

Technology I Sustainability

A public plinth plaza bounded by a constantly shifting building skin that denotes an urban ladnmark and cultural precinct.

Whilst its material language and structural elements allude to a high-tech / specification structure, the kinetic architecture of the building's facade borrows its grid and structure design from the VWL and Pretoria News printing works. The outer layer of the double faced provides a protective skin layer from the body of the building. Appearing to be a windowless and transluscent building at midday, the building transforms in appearance over time until it reaches near complete transparency at dusk. During the evening the building becomes a light box that illumniates the heart of the capital and plinth.

Floor plans were made deliberately non-hierachical, with open, light-exposed work spaces prioritised for all occupants regardless of postion or title. All window louvres on the exterior are manually operable to ensure the users have a sense of control over their own work environments with respect to the amount of light and air the deem optimum.

The building in essence forms a symbiotic relationship with its existing condition and user.



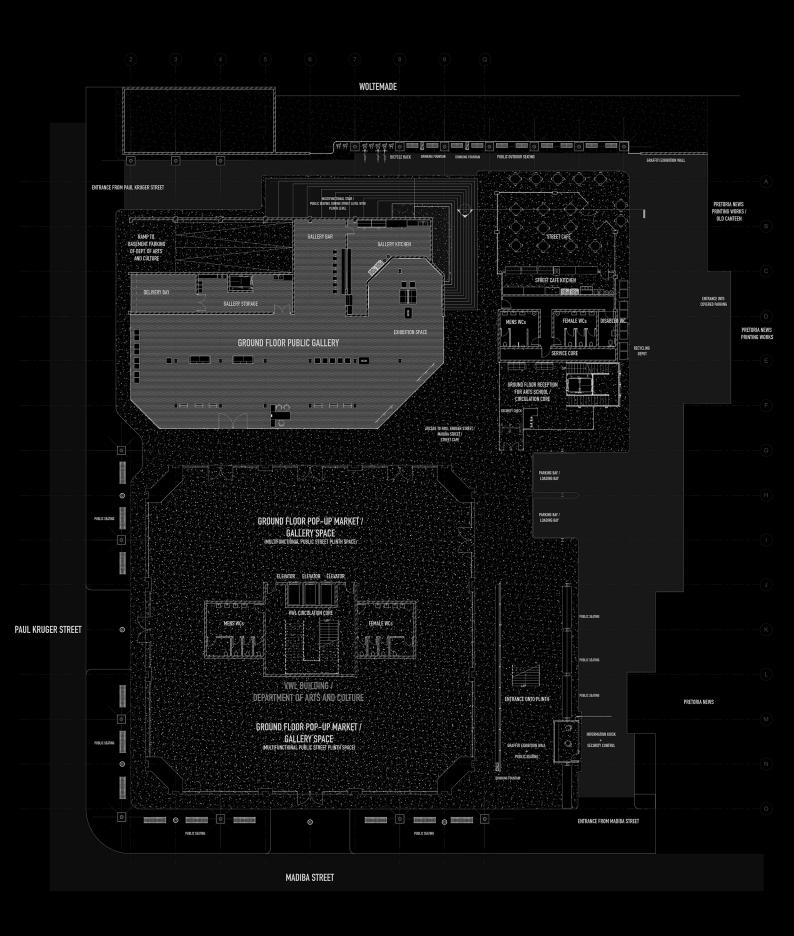


Fig. 7.1 First Floor Plan



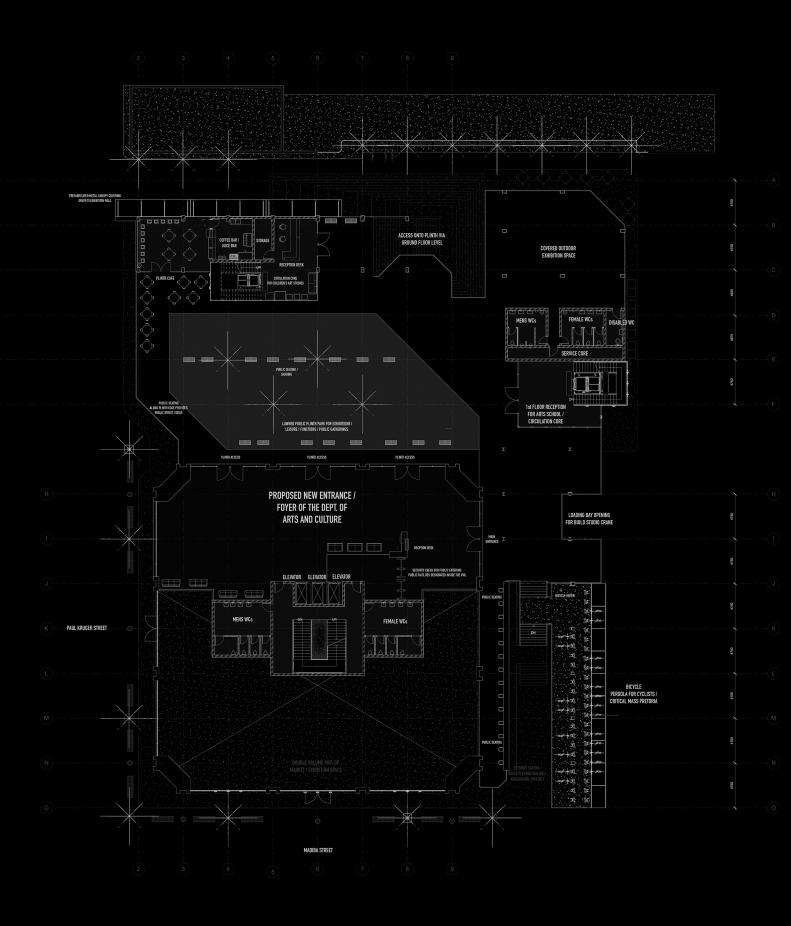


Fig. 7.2 First Floor Plan



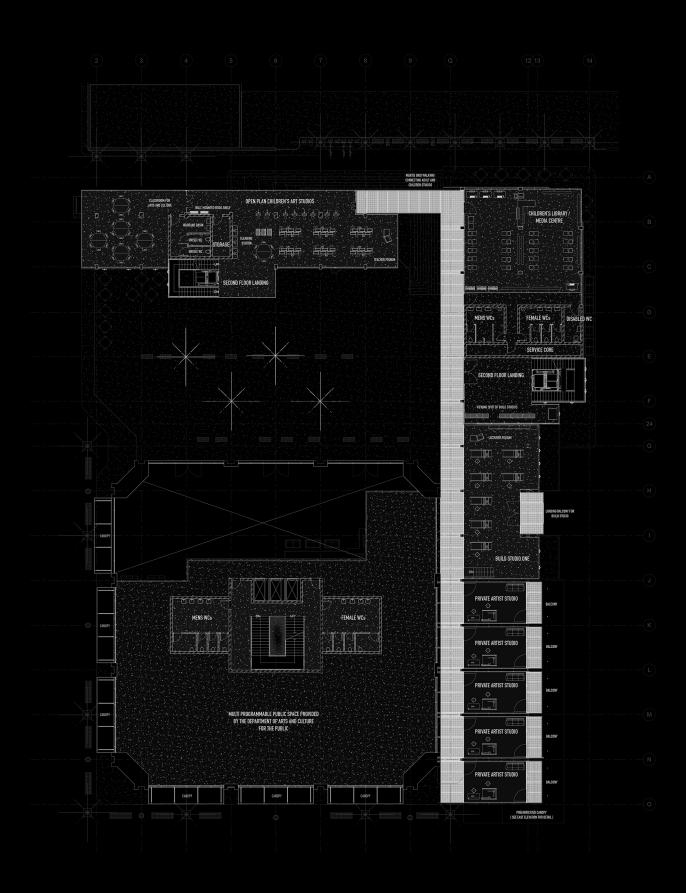


Fig. 7.3 Second Floor Plan



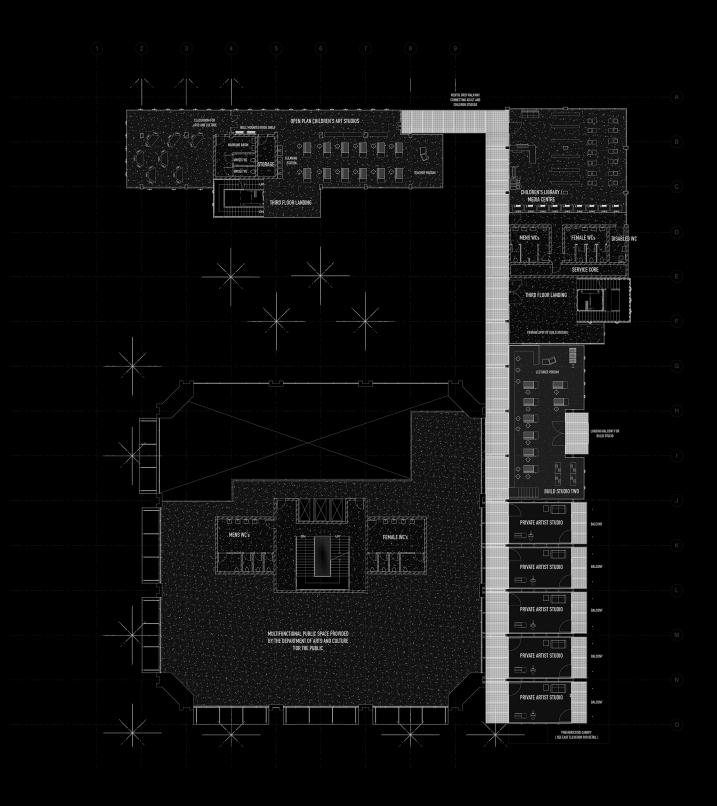


Fig. 7.4 Third Floor Plan



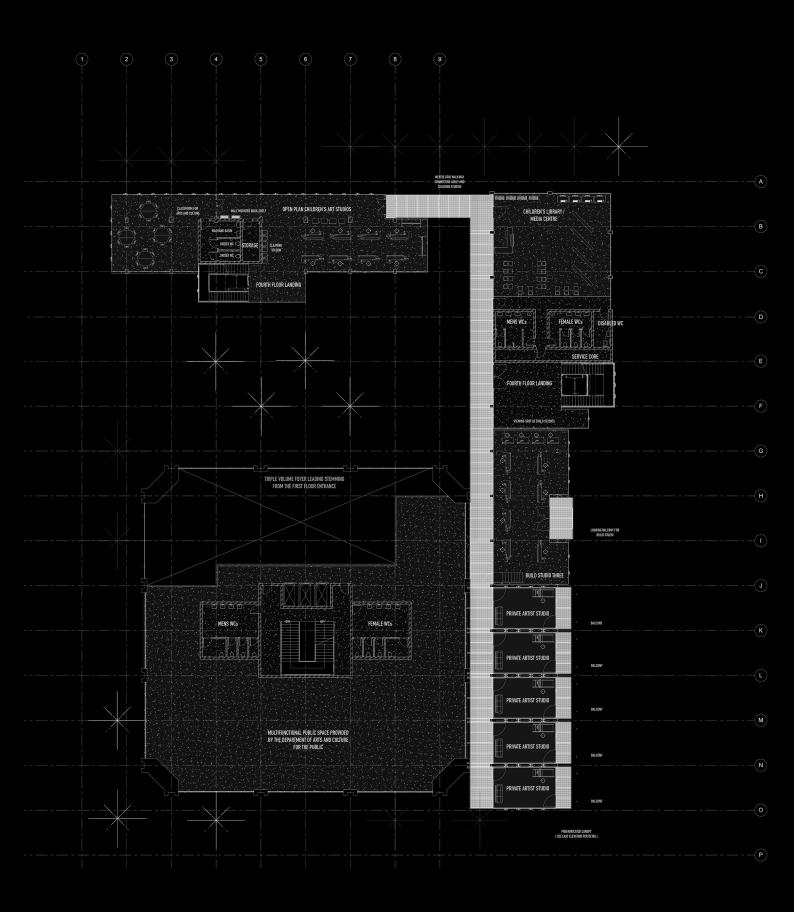


Fig. 7.6 Fifth Floor Plan



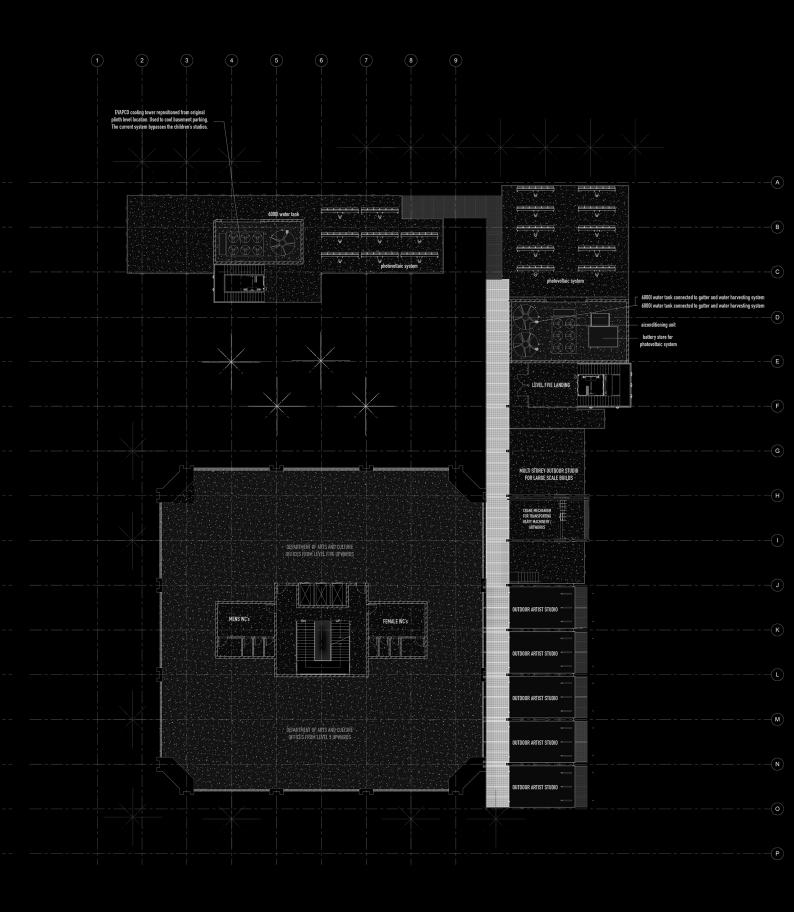
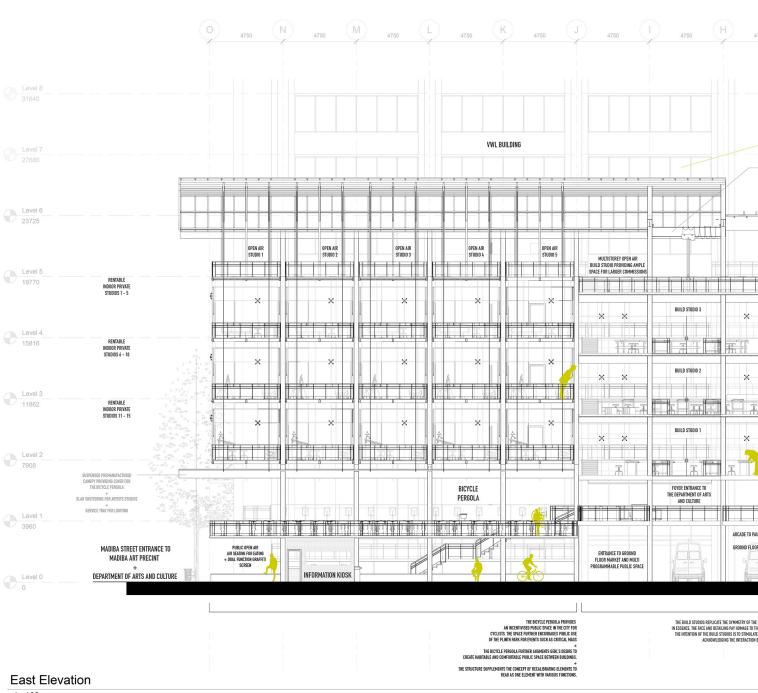


Fig. 7.6 Fifth Floor Plan

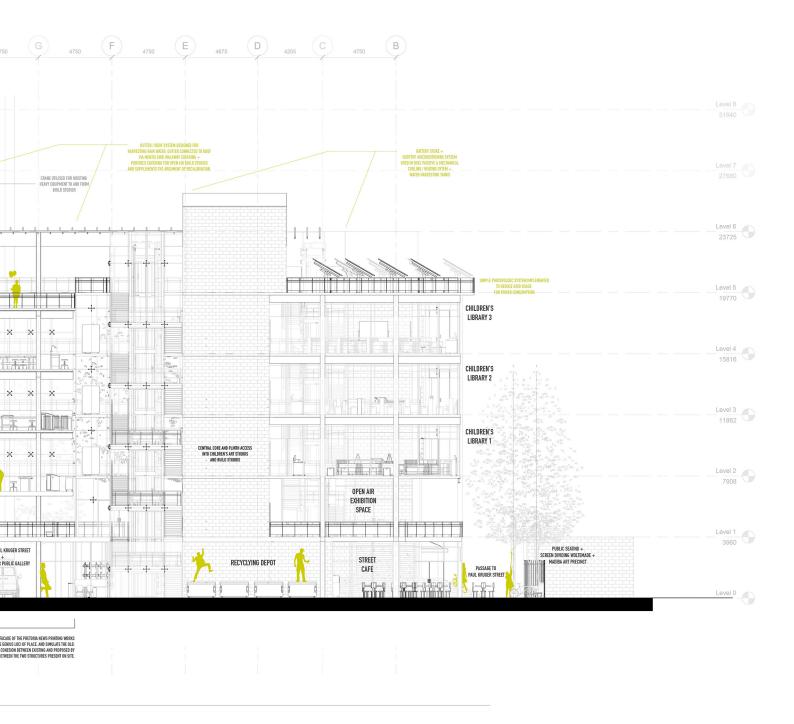




1:100

Fig. 7.7 East Elevation





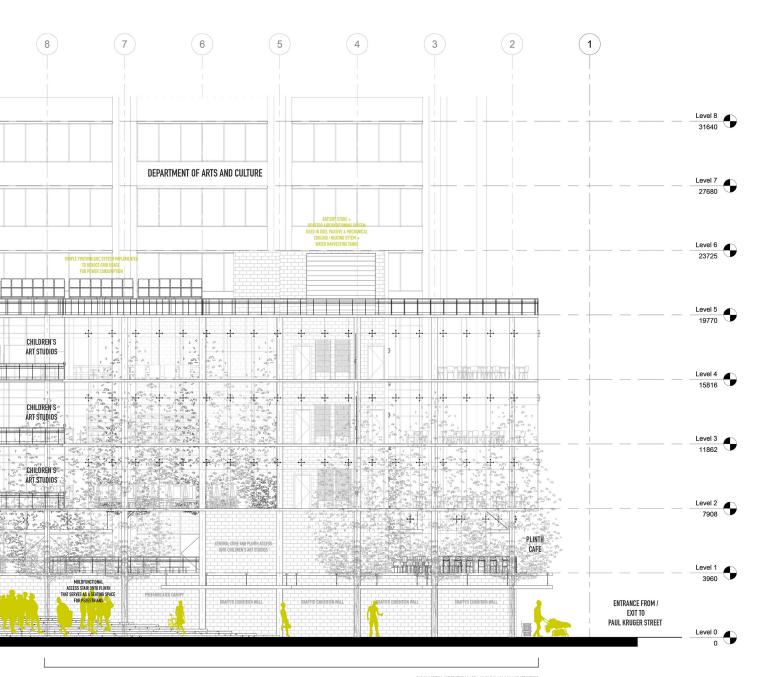




North Elevation

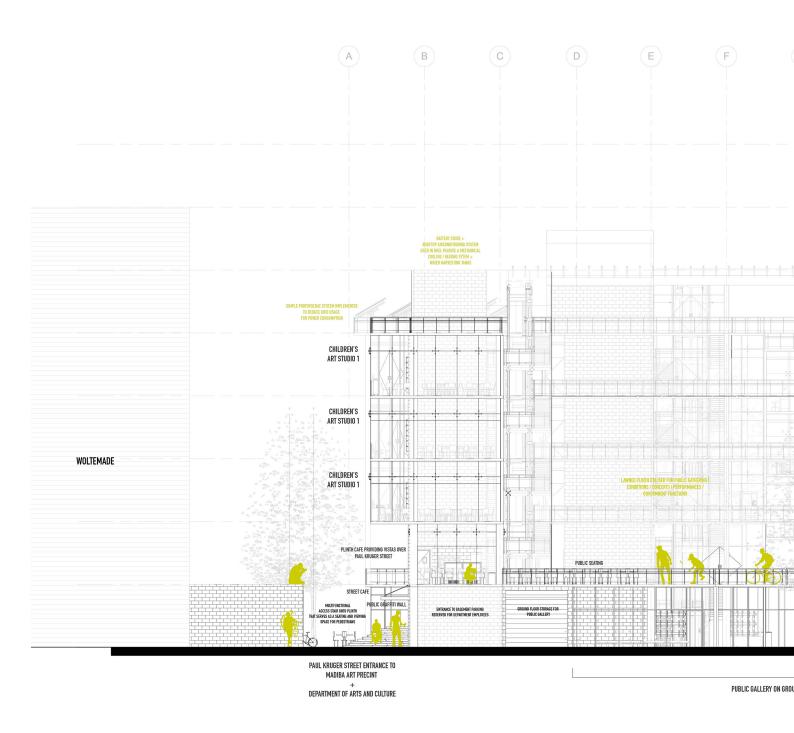
1:100





THE CHILDREN'S ARTIST STUDIOS ARE A SIMPLE GLASS BOX LIKE STRUCTUSE
WITH A NON-HERRENCHAR LOOR PLAN THE O'PEN MUTURE OF THE STRUCTURE
WAS DESIDENCE WITH THE INTERTION OF A CLINE AS A DEMIRITION USE OF PRESENTANS
AT STREET LEVEL ALONG PAUL KROBER FROM THE WOLTENAGE. AFT E: LEVEL
THE CUBE LIKE STRUCTURE SERVIS DIKKE AGAIN AS A SOURCE O'PEN LIST MEMILIATION
FOR THE RESIDENTS OF THE WOLTENAGE.



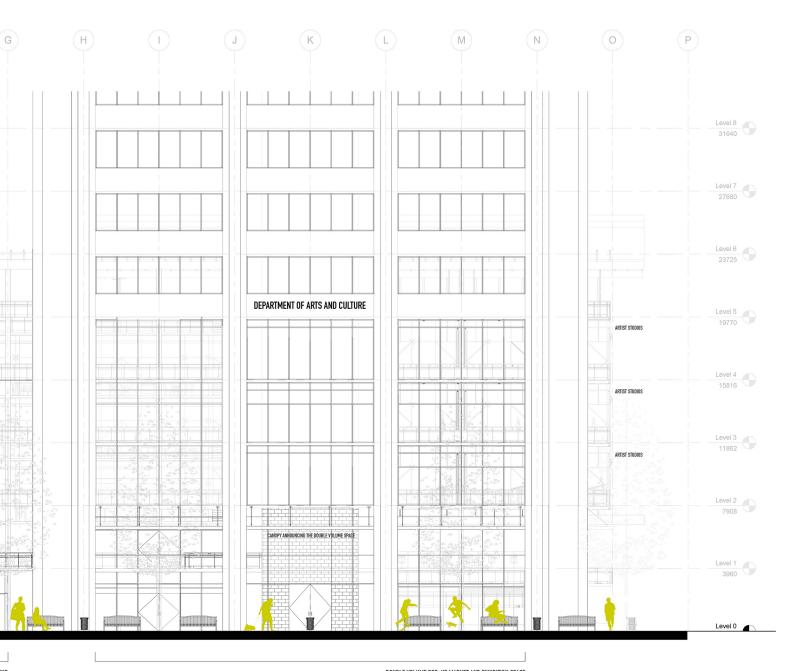


West Elevation

1:100

Fig. 7.9 West Elevation





DOUBLE VOLUME POP-UP MARKET AND EXHIBITION SPACE

THE CITY AF I'VE LOYE EXPENSESS IN THE DESING OF SAIN MARKET SPACE.

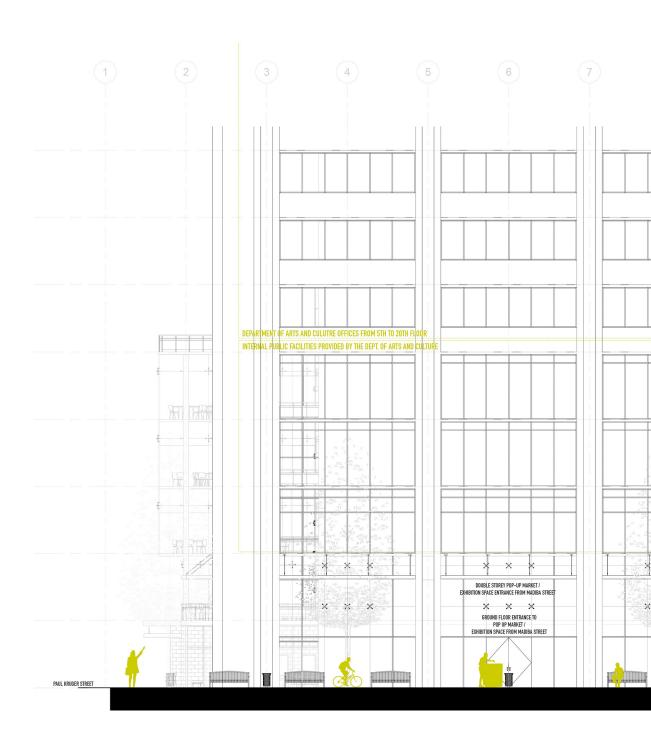
THE INTERIOR FORE AND ENTRANCE OF THE PETO FO ARTS AND CULTURE WILL

THUS OCCUPY THE FRIST FLOOR ("PLINTH LEYEL IN AN FERRIT TO DRAWT THE PRISIC ENTO THE PETCLANT

AT GROUND LEYEL IN ESSENCE, A BURNING OF BOUNDAINES EXPRESH PUPL CAN PRYSE WHILE THE

RECORNISING THE IMPORTANCE OF HERZICHY OF A BUILLING OF THIS NATURE.





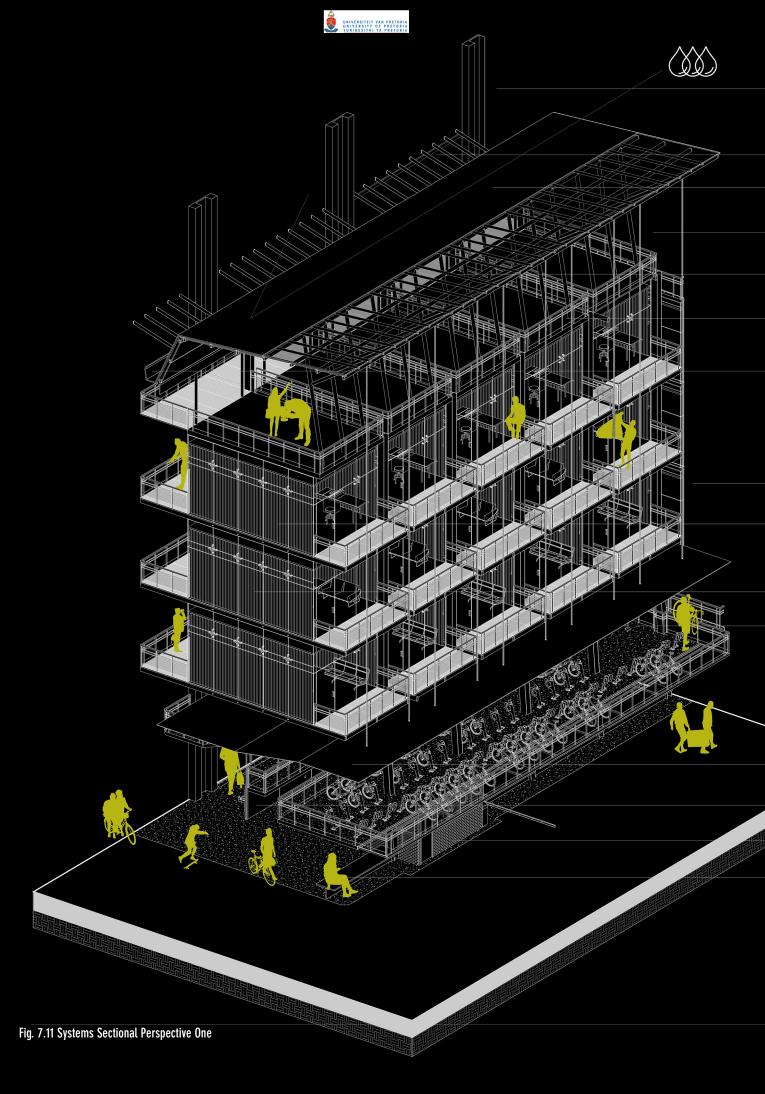
South Elevation

1:100

Fig. 7.10 South Elevation









	CONCRETE VWL COLUMNS.
	MENTIS GRID WALKWAY COVERING WALKWAY. FIXD TO VWL FLOOR SLAB
	GLAZING ROOF SYTEM TO ALLOW FOR LIGHT INTO ARTIST STUDIOS (OPEN AND CLOSED).
	DOUBLE STOREY OUTDOOR ARTIST STUDIOS FOR LARGER SCALE BUILDS AND COMMISSIONS.
	SUBSECTIONES OF SUBSECTION OF
	COPED STRUCTURAL STEEL HOLLOW SQUARE RAFTER AND PURLIN SYSTEM USED TO COVER THE OUTDOOR
	BUILD STUDIOS. GLAZING AND PERFORATED STEEL SHEETING USED TO ALLOW MAXIMUM LIGHT INTO ARTIST STUDIOS AND OPEN AIR BUILD STUDIOS.
	OUTDOOR ARTIST STUDIOS FOR LARGE SCALE BUILDS AND COMMISSIONS.
	SOURCE STATE OF SOURCE SAME SOURCE SO
	CUSTOM GUTTER SYSTEM USED TO CAPTURE RUN OFF WATER FROM ROOF AND TRANSPORT WATER ALONG GUTTER INTO WATER TANKS HOUSED ON WITHIN THE STORAGE FACILITY ON FLOOR PLAN FIVE.
	SUSPENSION CABLES SUPPORTING PREMANUFACTURED STEEL CANOPY.
	ARTIST STUDIOS UTILISE STRUCUTRAL GLAZING AND SPIDER CLAMP SYSTEM AS SKIN. RENTABLE PRIVATE ARTIST STUDIO BALCONY.
	SUSPENDED SHADING SCREENS LOCATED WITHIN THE ARTIST STUDIOS. SUSPENDED CEILING INTERNALLY SERVES TO HOUSE AIRCONDITIONING UNITS.
	BICYLCE PARKING METER INTENDED FOR CYCLIST USE. THE INTENTION THEREOF IS TO PROMOTE ACTIVATE USE of Bicycles in a future proposed city that encourages active pedestrian movement. Royalties will be granted to employees of the department. And occupants of the precinct who utilise this
	SYSTEM AS A MEANS OF TRANSPORTATION.
	PREMANUFACTURED STEEL CANOPY THAT SERVES AS A COVERING SCREEN FOR THE BICYCLE PERGOLA AND AS SHUTTERING FOR THE ARTIS STUDIOS' SLAB. THE STRUCTURE IS BOLTED TO THE SLAB WITH M BOLT PPM L
	WITH TWO RODS AND SUSPENDED FROM THE LARGE OVERHANG STRUCTURE ABOVE THE OPEN AIR STUDIOS.
	MULTIFUNCITONAL CONCRETE AND STEEL STRUCTURE THAT SERVES AS PUBLIC SEATING ON GROUND LEVEL AND A GRAFFITI EXHIBITION SCREEN FOR ARTISTS TO SHOWCASE THEIR WORK MONTHLY, AT FIRST FLOOR LEVEL THE
	STRUCTURE PIERCES THE PLINTH TO SERVE AS A SEATING SPOT FOR OCCUPANTS TO ENJOY A BITE TO EAT. INFORMATION KIOSK AND SECURITY CHECKPOINT ANNOUNCING THE ENTRANCE TO THE MADIBA ART
	PRECINCT FROM MADIBA STREET.
	INTEGRATED PULBIC SEATING DESIGNED TO FIT WITH STEEL COLUMN.
	STRUCTURAL TYPOLOGY LEAN-TO STRUCTURE UTILISING THE COLUMNS OF THE VWL AS SUPPORTS.

MADIBA STREET ENTRANCE | SECTION TWO

DESIGN EXPLANATION THROUGH THE IMPLEMENTATION OF JAN GEHL'S AND KELVIN CAMPBELL'S DESIGN STRAT-Egies and principles for succescul and comfortable urban environments at both street and Plinth Level. Raising the etrance of the department from street level to plinth level further Augments the idea of blurring the boundary between public and private whilst acknowledging The importance of Hierachy and Government Structures.

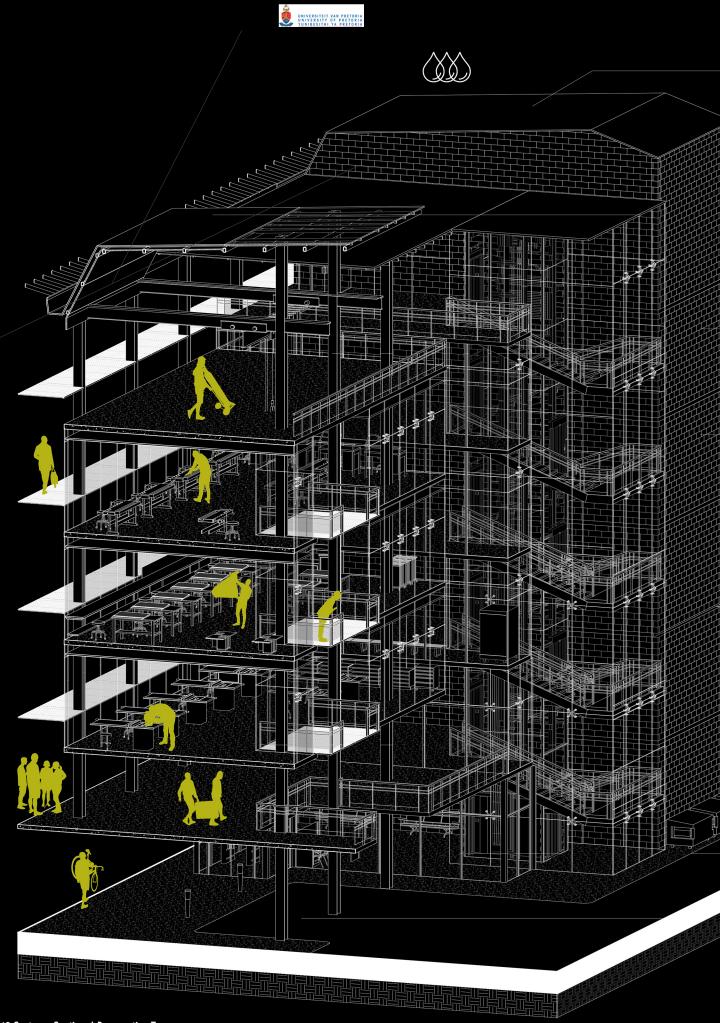
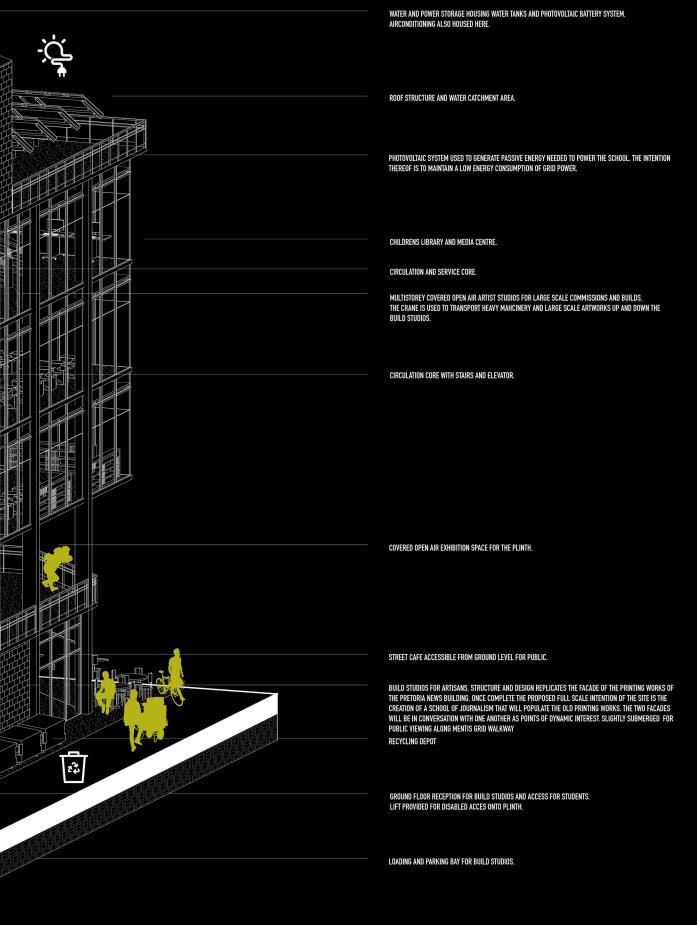


Fig. 7.12 Systems Sectional Perspective Two





MADIBA STREET ENTRANCE | SECTION TWO

THE FOLLOWING SECTION WAS DESIGNED WITH THE INTENTION OF CREATING A GLASS EXHIBITION BOX THAT IN-Trigues and captivates pedestrians at plinth and ground level. The structures would entice users to witness the workings of it interiors through visual stimulation.







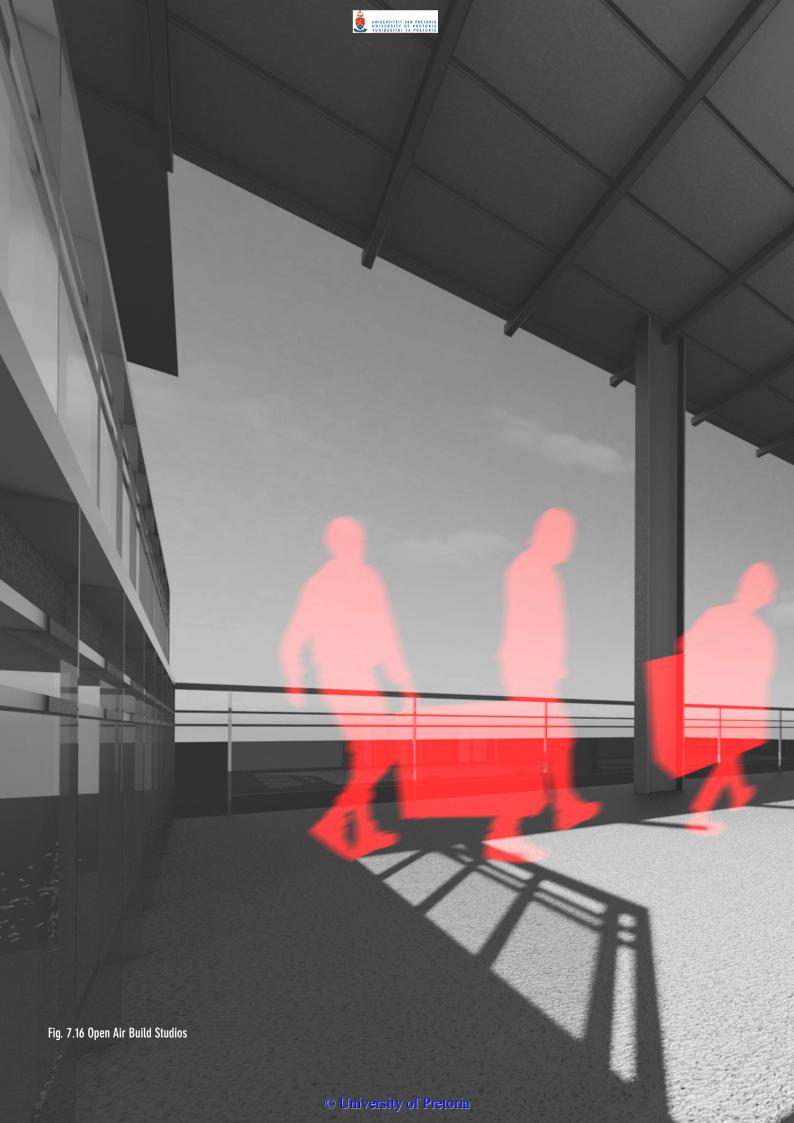
Fig. 7.13 Entrance to Madiba Art Precinct from Madiba Street











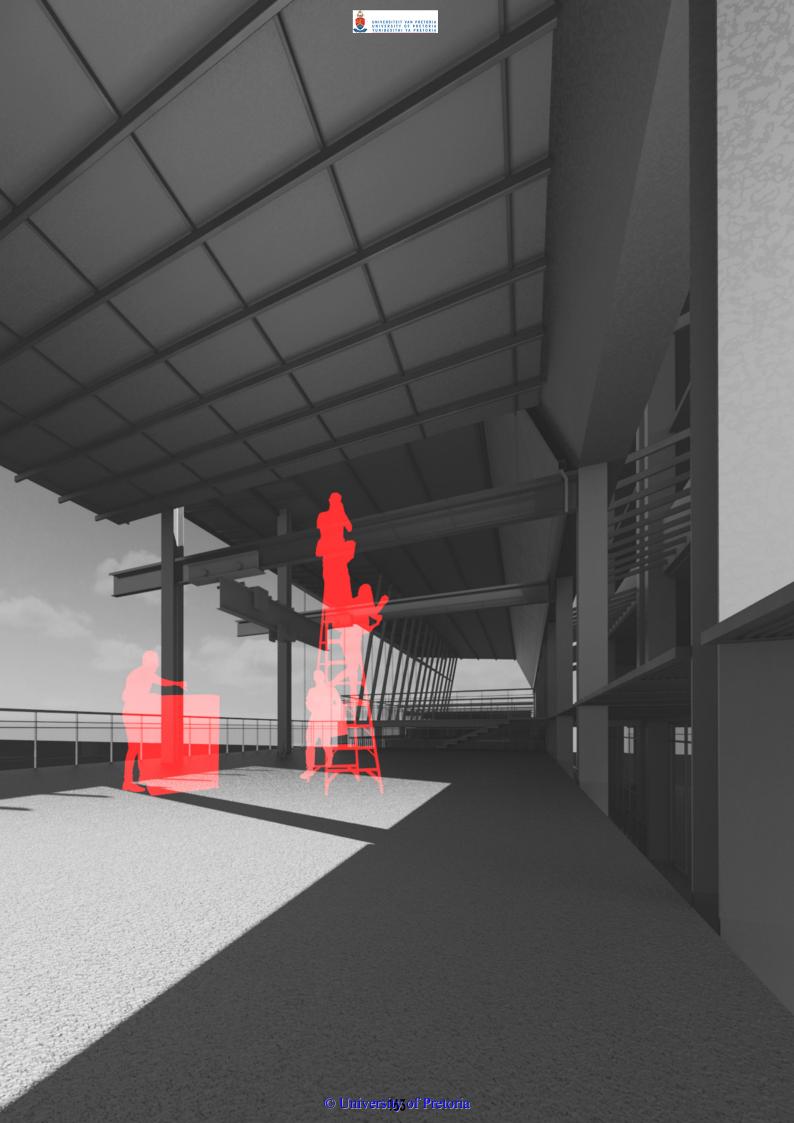








FIGURE REFERENCES

Fig. a Digital Render Pretoria (Author, 2015)

Fig. b Ian MacClements | Architect | Grandfather (Author, 2015)

Fig. c Original Image: Reconstruction by Lebbeus Woods, 1964. Computer rendering by Carlos Fueyo, 2006. (https://mcrassus.files.wordpress.com/2015/01/meaning-emerging-from-destruction1.pdf, 2015)

Edited Image: Woods's War and Architecture reconceptualised and interpreted as urban narrative relative to exploration and manipulation of urban void. (Author, 2015)

Fig. d Abstract: A series of recalibrated urban voids and their impact on the urban climate. (Author, 2015).

- Fig. 1.1 Graphic interpretation of normative stance. Christopher Ian MacClements abbreviated as C.[i].M (Author, 2015)
- Fig. 1.2 Conceptual sketch exploring the the possibility of using urban fabric and voids in the creation of a prototypical urban landscape (Author, 2015)
- Fig. 1.3 The five know void typologies according to Trancik (Author, 2015)
- Fig. 1.4 Pretoria's void networks (Author, 2015)
- Fig. 1.5 The Urban Vanguard (Author, 2015)
- Fig. 1.6 The Urban Vanguard (http://drop-your-drink.com/)
- Fig. 1.7 The Urban Vanguard (http://drop-your-drink.com/)
- Fig. 1.8 Urban Symbiosis as a result of conversation between Vanguard and Void (Author, 2015)
- Fig. 2.1 Lebbeus Woods's "Proto-Urban Condition" (http://lebbeuswoods.net/, 2015)
- Fig. 2.2 "Freedom Photo Challenge Exhibition" presented by Pretoria Street Photography in collaboration with the US Embassy. Th event was held at the Pretoria News building along Madiba Street. (http://drop-your-drink.com/, 2015)
- Fig. 2.3 The Conflicts Between Top-Down and Bottom-Up (http://www.smarturbanism.org.uk/, 2015)
- Fig. 2.4 The realised potentials if Top-Down evolve to become conducive to Bottom-Up (http://www.smarturbanism.org.uk/, 2015)
- Fig. 2.5 Interpreting Campbell's Seven Drivers (Author, 2015)
- Fig. 2.6 Interpreting Campbell's Seven Drivers (Author, 2015)
- Fig. 2.7 Interpreting Campbell's Seven Drivers (Author, 2015)
- Fig. 2.8 Interpreting Campbell's Seven Drivers (Author, 2015)
- Fig. 2.9 Towards a proto-urban condition / [R]ecalibrated uran plinth / Abstract (Author, 2015)
- Fig. 2.10 Conceptual Understanding Urban Void (Author, 2015)
- Fig. 2.11 Conceptual Understanding Urban Tissue (Author, 2015)
- Fig. 2.12 Market on Main, Pretoria ((http://drop-your-drink.com/, 2015)
- Fig. 2.13 Scales of Creativity | Locating Vanguard Networks (Author)

Fig. 2.14 Cataloguing Pretoria's Emergent Vernacular

Pretoria Street Photography (http://drop-your-drink.com/, 2015)

RE: Capitoli (https://www.facebook.com/recapitoli/, 2015)

Molo Mollo (www.molomollo.co.za, 2015)

Hello Ambassador (www.helloambassador.co.za, 2015)

Capital Arts Revolution (http://drop-your-drink.com/, 2015)

Fig. 2.15 Cataloguing Pretoria's Emergent Vernacular

The Street Store (http://thestreetstore.org/, 2015)

Drop Your Drink (http://drop-your-drink.com/, 2015)

Capital Collective (www.capitalcollective.co.za, 2015)

The Social Market PTA (http://drop-your-drink.com/, 2015)

Capital Urban Market (http://drop-your-drink.com/, 2015)

Fig. 2.16 An interconnected series of emergent urban clusters (Author, 2015)



- Fig. 3.1 Interstitial (Author, 2015)
- Fig. 3.2 Challenging Preconceptions (Author, 2015)
- Fig. 3.3 Urban Vision Strategy (Author, 2015)
- Fig. 3.4 Research Methodology (Author, 2015)
- Fig. 3.5 Tshwane Vision 2055 (Author, 2015)
- Fig. 3.6 Government mapping (Author, 2015)
- Fig. 3.7 Public and pedestrian movement (Author, 2015)
- Fig. 3.8 Marginal Spaces (Author, 2015)
- Fig. 3.9 Marginal Spaces (Author, 2015)
- Fig. 3.10 Insurgent Activity (Author, 2015)
- Fig. 3.11 Insurgent Activity Study (Author, 2015)
- Fig. 4.1 Inotruction to site (yellow) | Abstract interpretation of contemporary urban climate and allocation of site (yellow)
- Fig. 4.2 Site Images
- Fig. 4.3 Site Images
- Fig. 4.4 View from atop the VWL plinth, Paul Kruger Street.
- Fig. 4.5 Urban Research Matrix A | B
- Fig. 4.6 Site investigation / Interpreting Urban Theory
- Fig. 4.7 Site investigation / Interpreting Urban Theory
- Fig. 4.8 Site investigation / Matrix A | Vertical Study
- Fig. 4.9 Site investigation / Matrix A | Vertical Study
- Fig. 4.11 Site investigation / Matrix A | Horizontal Study
- Fig. 4.10 Site investigation / Matrix A | Vertical Study
- Fig. 5.1 The Proto Urban Condition (http://lebbeuswoods.net/, 2015)
- Fig. 5.2 The five qualities need for a successful city (Author, 2015)
- Fig. 5.3 The Seven Typlogies of temporary urban use (Author, 2015)
- Fig. 5.4 Jan Gehl's matrix for designing well consolidated public and civic urban space (http://www.walk21.com/, 2015)
- Fig. 5.5 Jan Gehl's identified user groups and activities expected in public spaces (http://www.walk21.com/, 2015)
- Fig. 5.6 Warm City plinth typologies. These include pop-up market spaces and stores (www.thecityateyelevel.com/, 2015)
- Fig. 6.1 Morphosis, San Francisco Federal Building (morphopedia.com, 2015)
- Fig. 6.2 Abstract | Street edge condition and exploration | City at Eye Level (Author, 2015)
- Fig. 6.3 Abstract | Plinth exploration | Hybrid plinth condition (Author, 2015)
- Fig. 6.4 Exploration of site | Micro urban climate (Author, 2015)
- Fig. 6.5 Exploration of site | Micro urban climate (Author, 2015)
- Fig. 6.6 Threshold and progression of public space from Paul Kruger Street (Author, 2015)
- Fig. 6.7 Conceptual exploration of recalibration | public space / structure (Author, 2015)
- Fig. 6.8 Threshold and hierachical progression of structure from Madiba Street entrance (Author, 2015)
- Fig. 6.9 Conceptual development of structure (Author, 2015)
- Fig. 6.10 Threshold and hierachical progression of structure from Madiba Street entrance (Author, 2015)
- Fig. 6.11 Exploration of systems and access into site (Author, 2015)
- Fig. 6.12 Exploration of public recalibrated stairs as public seating | one element multiple fucntions (Author, 2015)
- Fig. 6.13 Exploration of recalibrated stairs | detailing (Author, 2015)
- Fig. 6.14 Exploration of detailing | mentis grid walkway | beam to VWL column connection | beam to beam connection (Author, 2015)
- Fig. 6.15 Exploration of detailing | menti grid walkway | column footing connection | public seating to column connection (Author, 2015)
- Fig. 6.16 Exploration of detailing | bicycle pergola construction | beam to beam connection (Author, 2015)
- Fig. 6.17 Exploration of detailing | mentis grid detail | beam to VWL connection (Author, 2015)



BIBLIOGRAPHY

Brenner, N.2006. The Global Cities Reader (Routledge Urban Reader Series). 1 Edition. Routledge.

Campbell, K | EngagingCities. 2016. Kelvin Campbell | EngagingCities. [ONLINE] Available at: http://engagingcities.com/author/kelvin-campbell. [Accessed 4 March 2015].

Cruz, M. & Gage, S. 2009. Interaction. in Allen, L. Borden, I. O'Hare, N & Spiller, N. Bartlett designs: speculating with architecture. London: John Wiley & sons Ltd.

Crawford, M. 2008. Everyday Urbanism: Expanded. Expanded Ed Edition. The Monacelli Press.

Dajo & Myeza, [ONLINE] Available at: http://www.thetshwaneopen.co.za/Public%20participation/Online%20version-%20CoT%20 2055%20vision[smallpdf.com].pdf [Accessed 23 March 2015]

Dewar. D. 2005 South African Cities: A Manifesto for Change. Urban Problems Research Unit, University of Cape Town.

Easterling, K. VersoBooks.com. 2016. VersoBooks.com. [ONLINE] Available at: http://www.versobooks.com/books/1753-extrastate-craft. [Accessed 01 February 2016].

Gehl, J 2011. Life Between Buildings: Using Public Space. 6 Edition. Island Press.

Gehl, J. & Gemzoe, L. 2003. New City Spaces. Copenhagen: The Danish Architectural Press.

Harvey, D. 2013. Rebel Cities: From the Right to the City to the Urban Revolution. 1 Edition. Verso

Harvey, D. 1975. Social Justice and the City. New edition Edition. Hodder & Stoughton Educational.

Hertzberger, H. 2013. Lessons for Students in Architecture. 2 Revised Edition. nai010 publishers.

Hlahla, P. 2007. New council HQ to lead revamp of inner city. [Online] Available: <www.iol.co.za/news/south-africa/newcouncil-hq-to-leaad-revamp-of-innercity- 1.372228>

Ivan Illich, 2001. Tools for Conviviality. Edition. Marion Boyars.

Keane, M. 2013. Creative Industries in China: Art, Design and Media. 1 Edition. Polity.

Lehtovuori, P. [ONLINE] http://www.panulehtovuori.net/ [Accesses 12 August 2015]

Lydon, M. 2015. Tactical Urbanism: Short-term Action for Long-term Change. Edition. Island Press.

Lefebvre, H. 1992. The Production of Space. 1 Edition. Wiley-Blackwell.

Mehaffy, M. 2011. Design for a Living Planet: Settlement, Science, and the Human Future. Edition. Sustasis Foundation. Add to My References

Overmeyer, K. [ONLINE] http://popupcity.net/klaus-overmeyer-on-the-importance-of-urban-pioneers/ [Accessed 10 September 2015]

Pallasma, J. 1996. The Eyes of the Skin and the Senses. London Academy

Pulkinnen, K.L. 2016. [ONLINE] Available at: http://journals.isss.org/index.php/proceedings57th/article/viewFile/2072/718. [Accessed 09 February 2015].



Rogers, E. 2003. Diffusion of Innovations, 5th Edition. 5th Edition. Free Press.

Sanders p. 2000. Defining Relevant Architecture in South Africa. Architectural Research Quarterly 4(1):6

Trancik, R. 1986. Finding Lost Space: Theories of Urban Design. 1 Edition. Wiley.

The Smart Urbanist » Unleash Massive Small. 2015. The Smart Urbanist » Unleash Massive Small. [ONLINE] Available at: http://www.smarturbanism.org.uk/. [Accessed 25 February 2015].

UNESCO . 2006. [ONLINE] Available at: http://portal.unesco.org/culture/en/files/40768/12705461905Creative_Industries_Cluster_Study_Report_Stage_1.pdf/Creative_Industries_Cluster_Study_Report_Stage_1.pdf. [Accessed 09 July 2006].

Woods, Lebbeuswoods.net. 2016. lebbeuswoods.net. [ONLINE] Available at: http://lebbeuswoods.net/. [Accessed 5 February 2015].