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Chapter 10:
PRODUCT

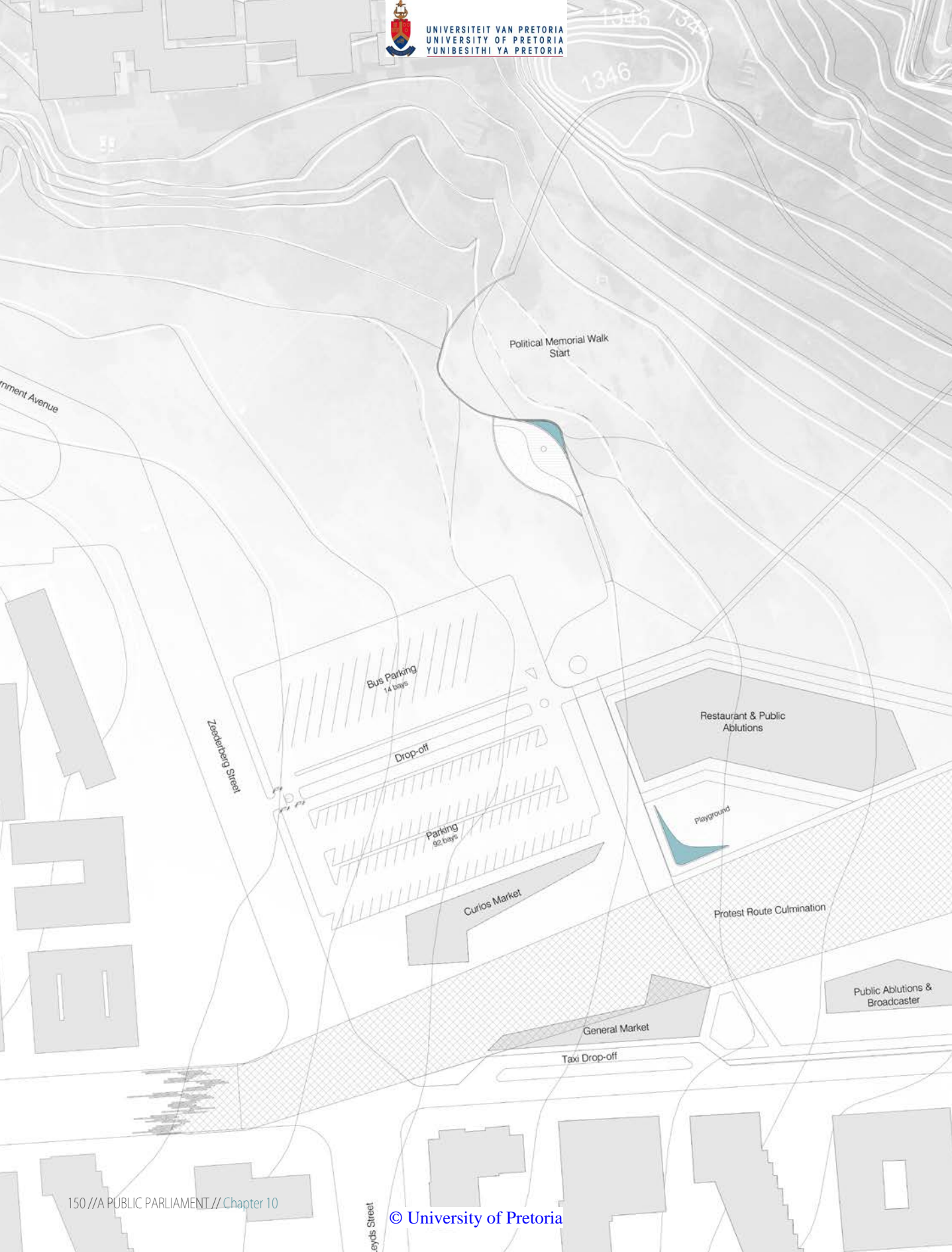
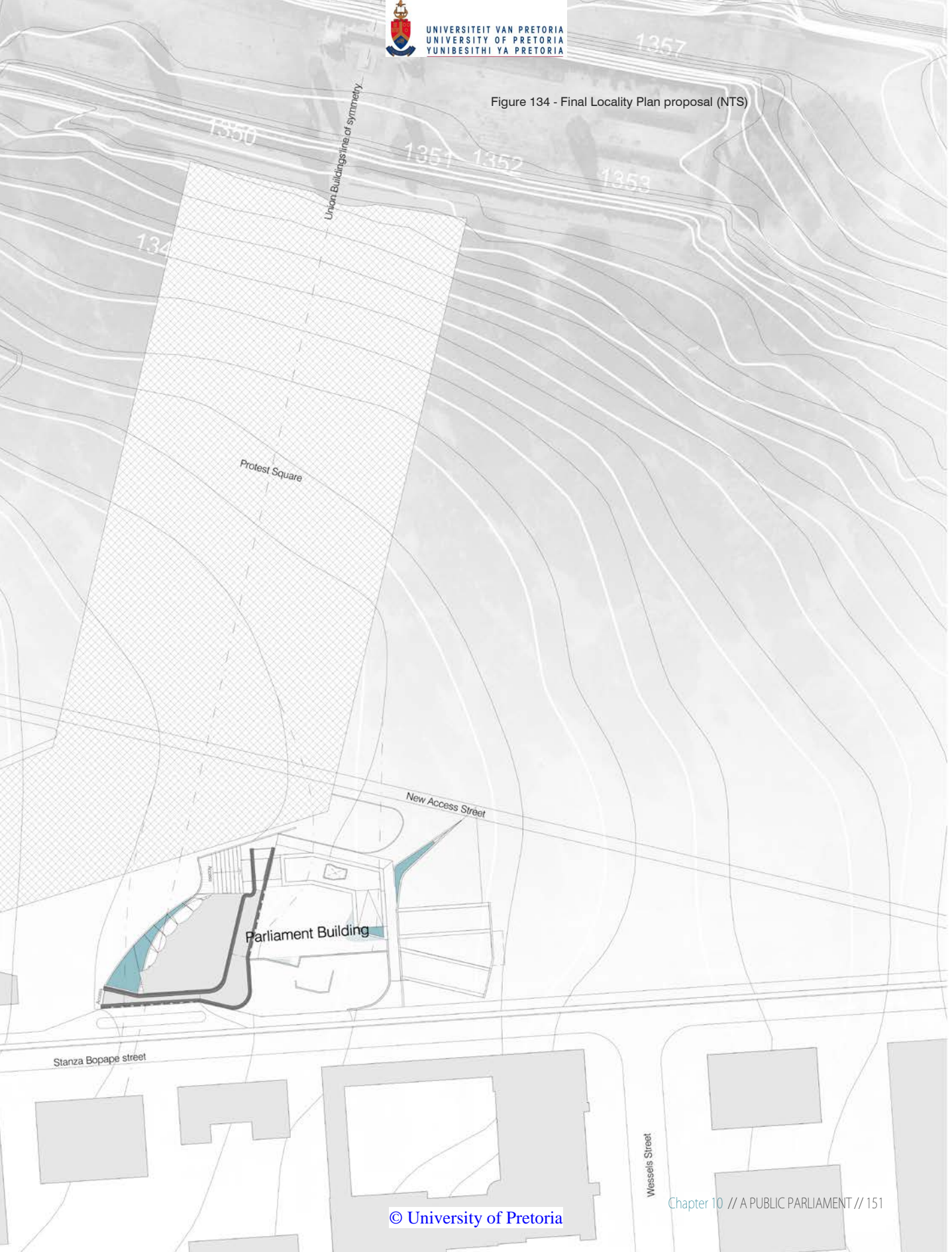




Figure 134 - Final Locality Plan proposal (NTS)



10.1. Political Interpretation Memorial

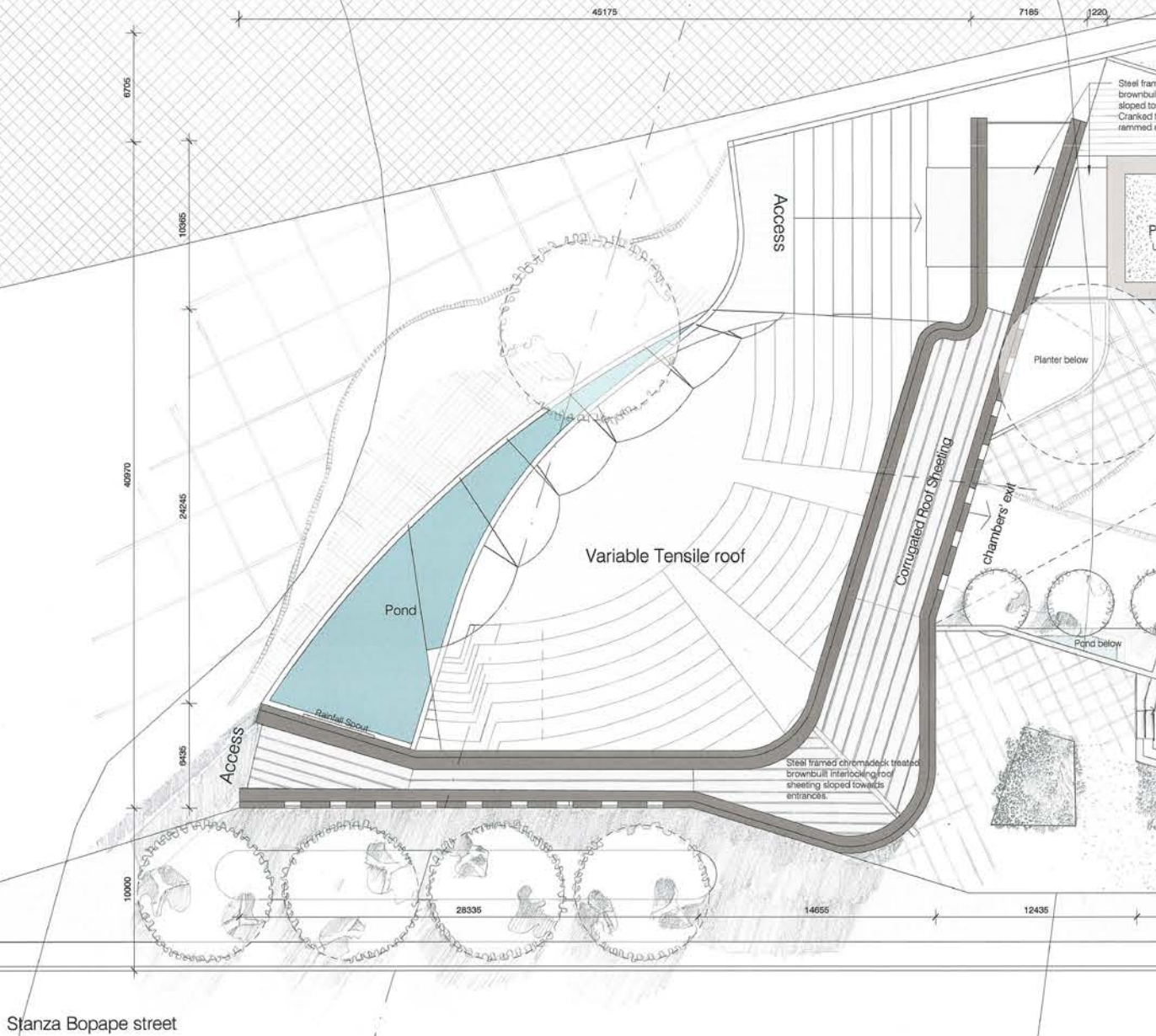
The political memorial proposal illustrates the proposed sense of space required for contemplative spaces, the spaces can be for internal reflection or group discussion. The statues and their accompanying translations become triggers for dialogue and introspection into our roles in the political continuum of South Africa. The public nature and concealed observation from above enforces the necessity of this introspection because of the accountability it implies.



Figure 135 - Section of the Political interpretation memorial path.

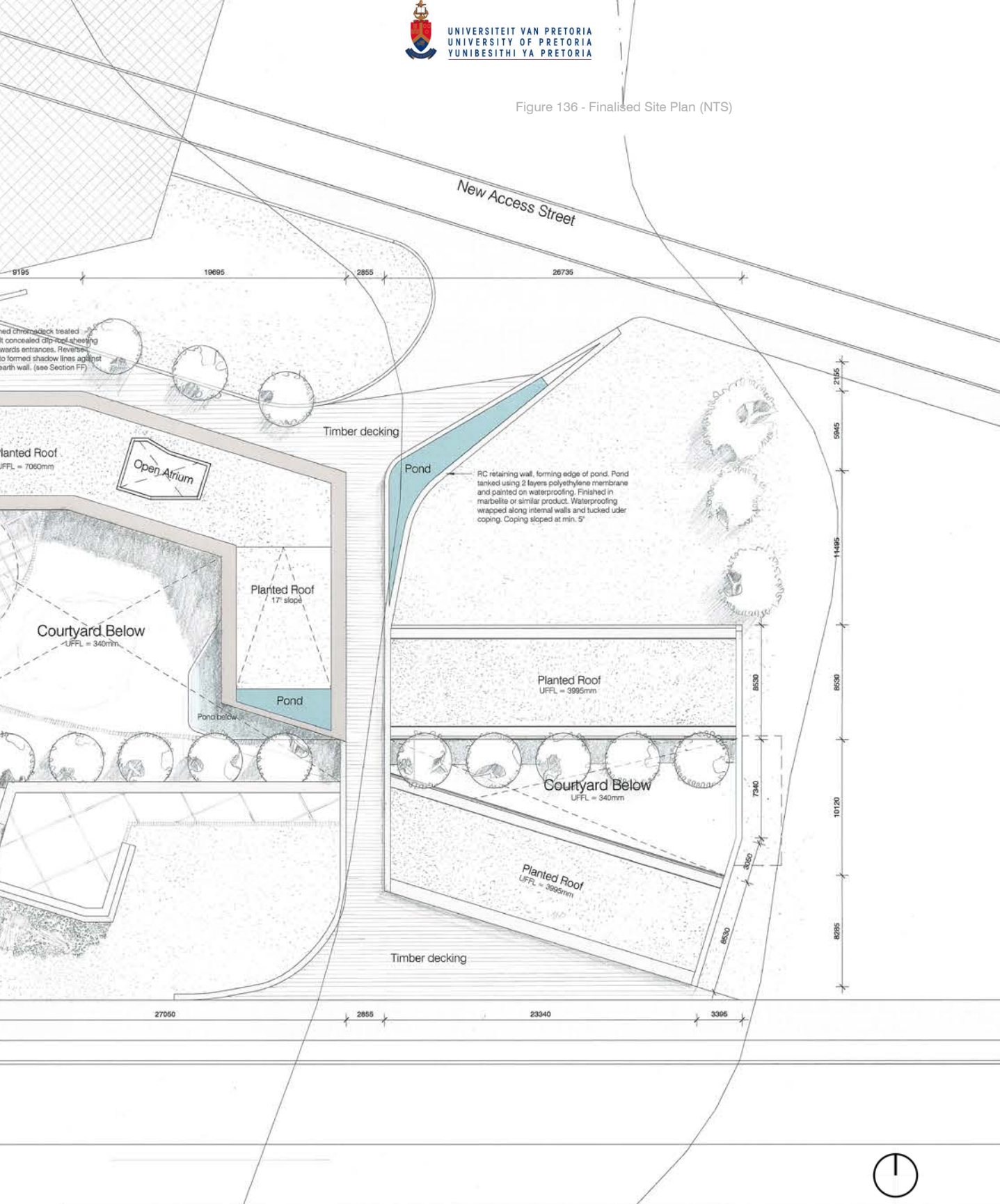


10.2. Building



Stanza Bopape street

Figure 136 - Finalised Site Plan (NTS)



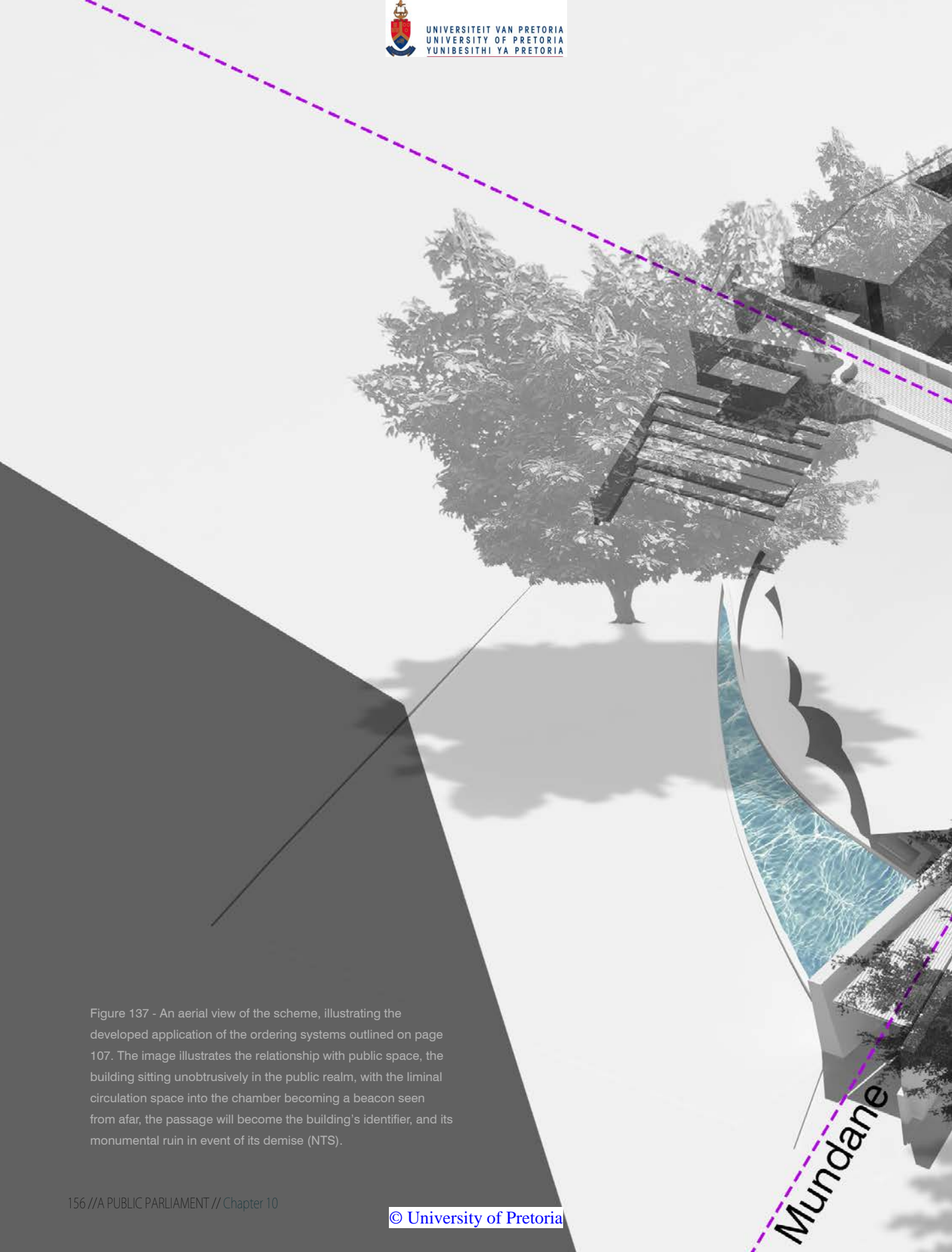
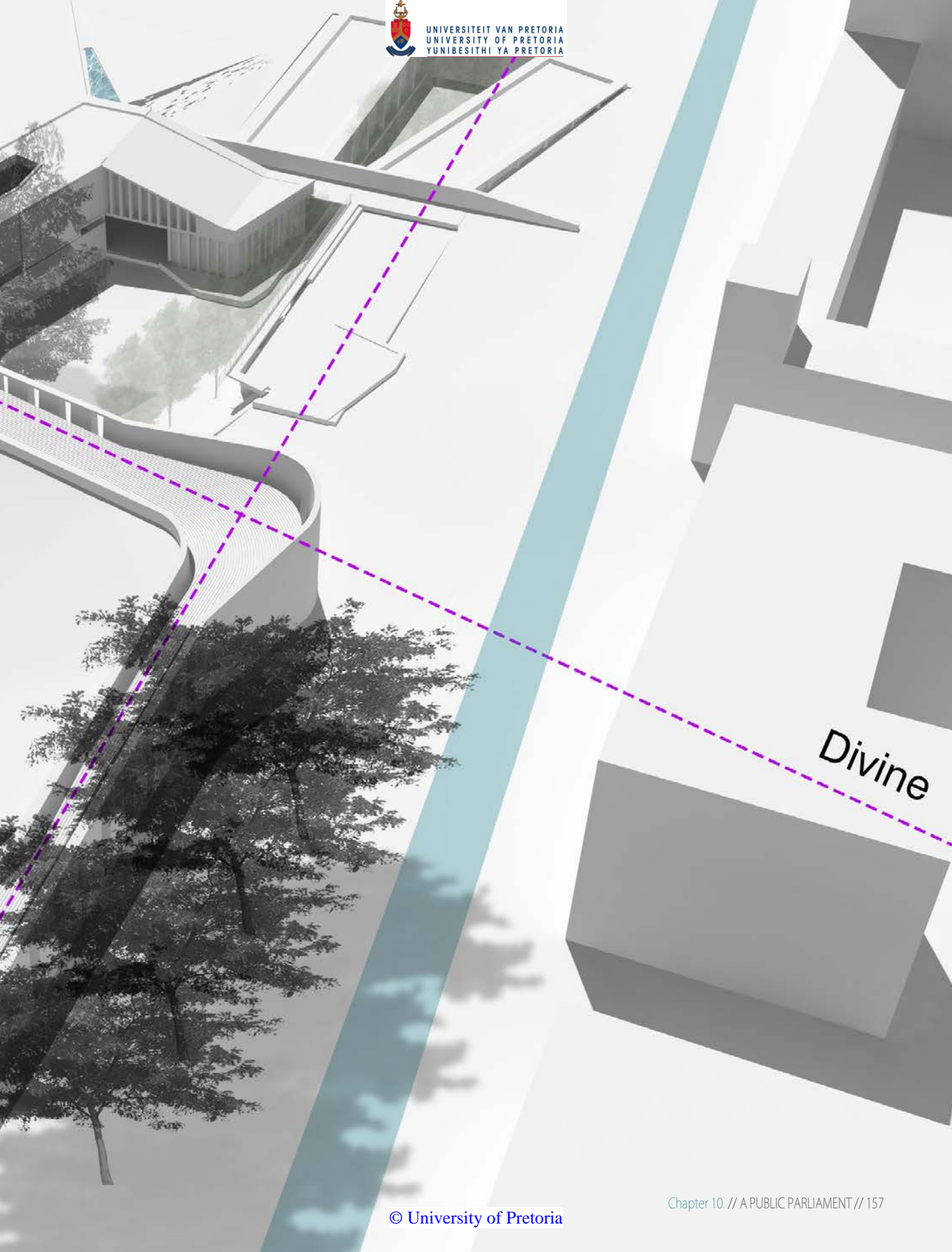


Figure 137 - An aerial view of the scheme, illustrating the developed application of the ordering systems outlined on page 107. The image illustrates the relationship with public space, the building sitting unobtrusively in the public realm, with the liminal circulation space into the chamber becoming a beacon seen from afar, the passage will become the building's identifier, and its monumental ruin in event of its demise (NTS).



Divine

10.2.1. Ground Floor Plan

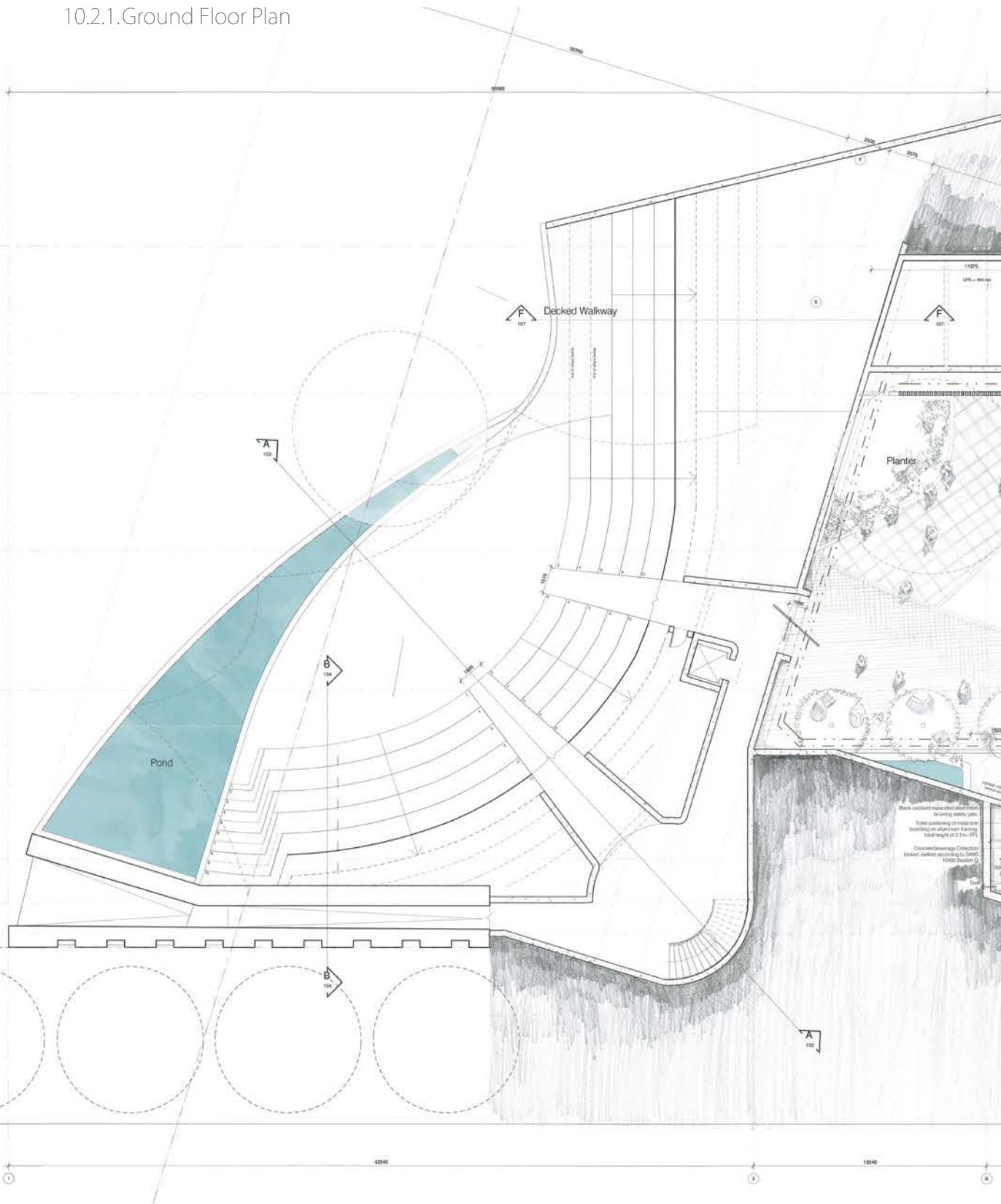
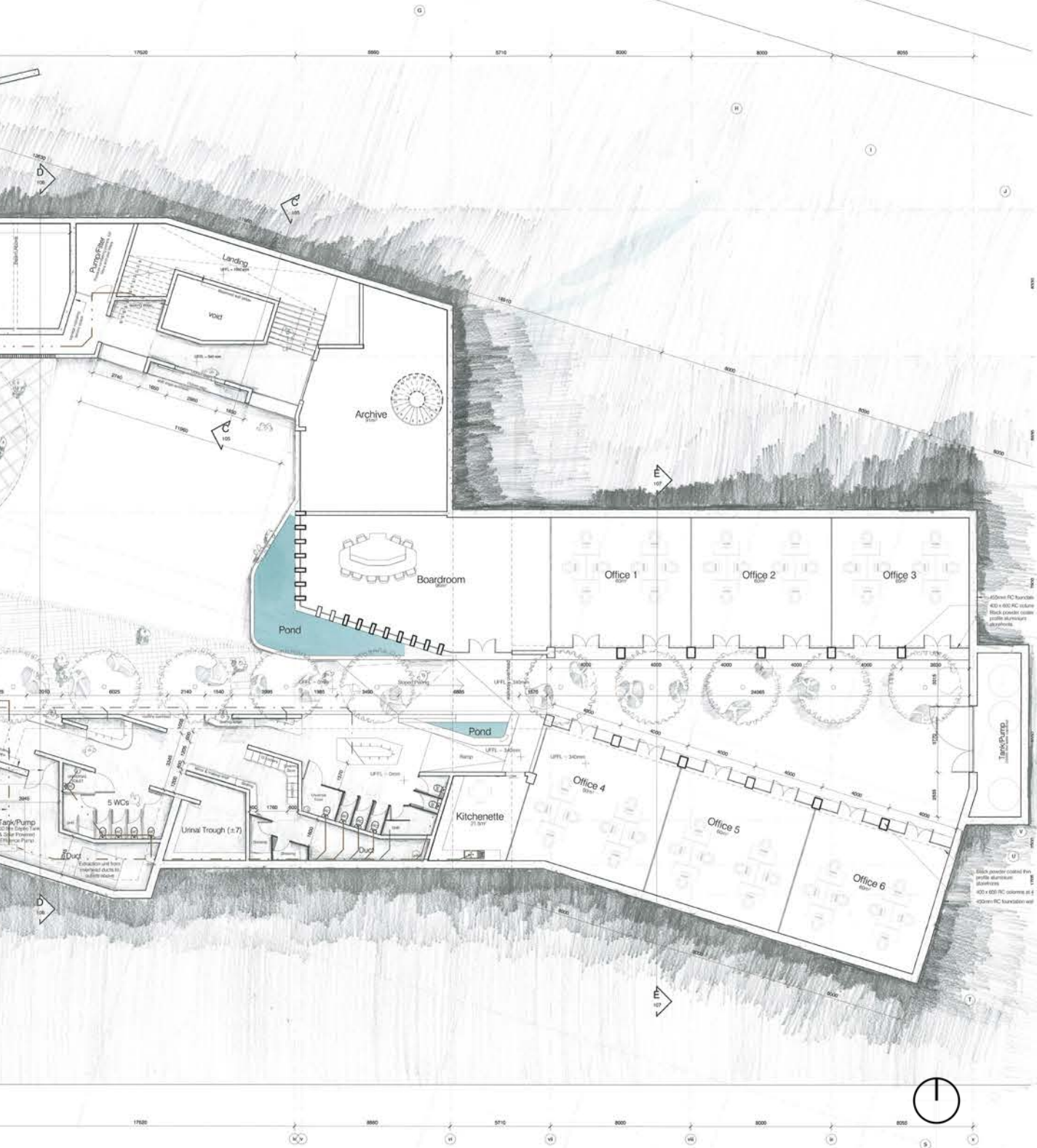
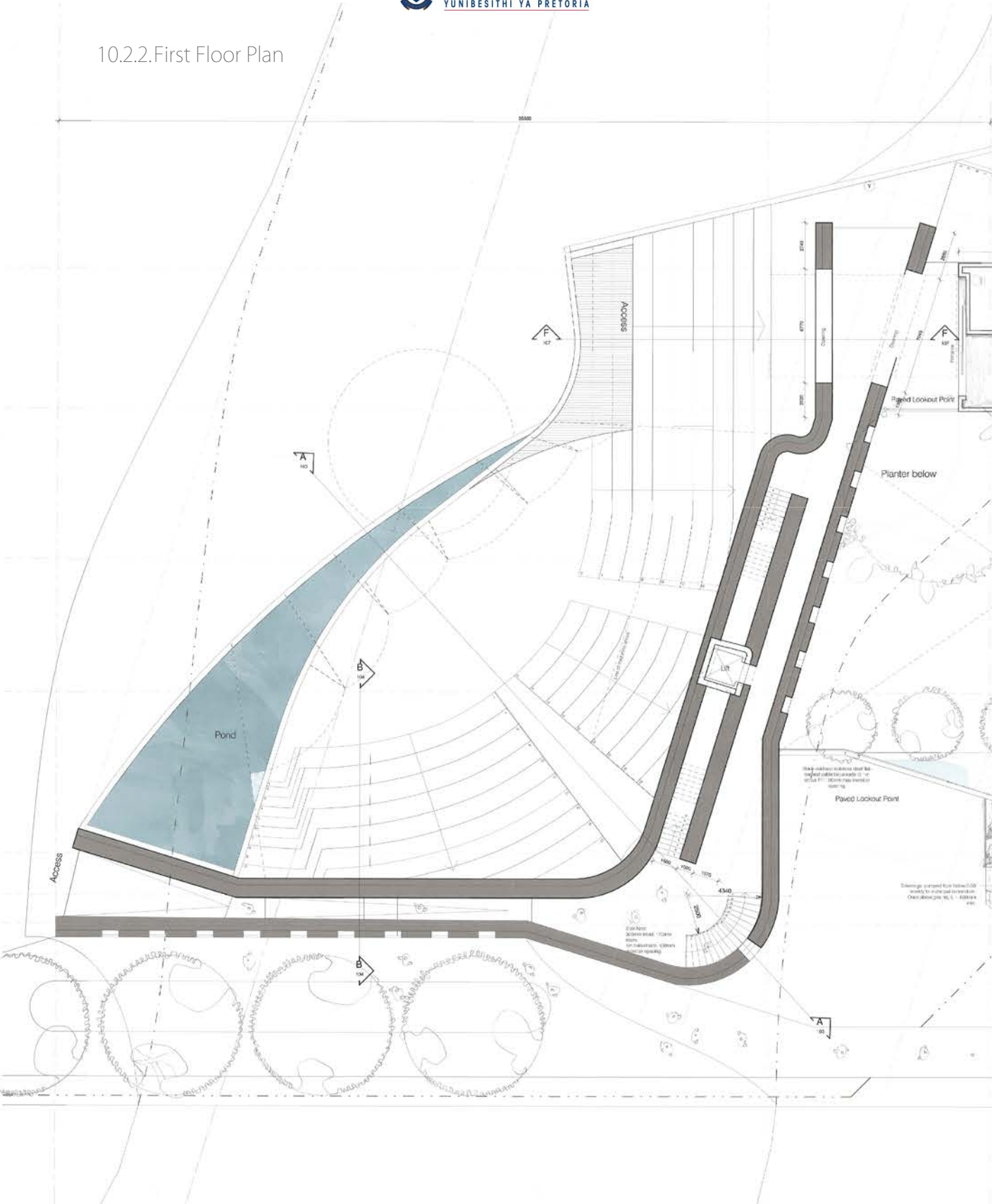
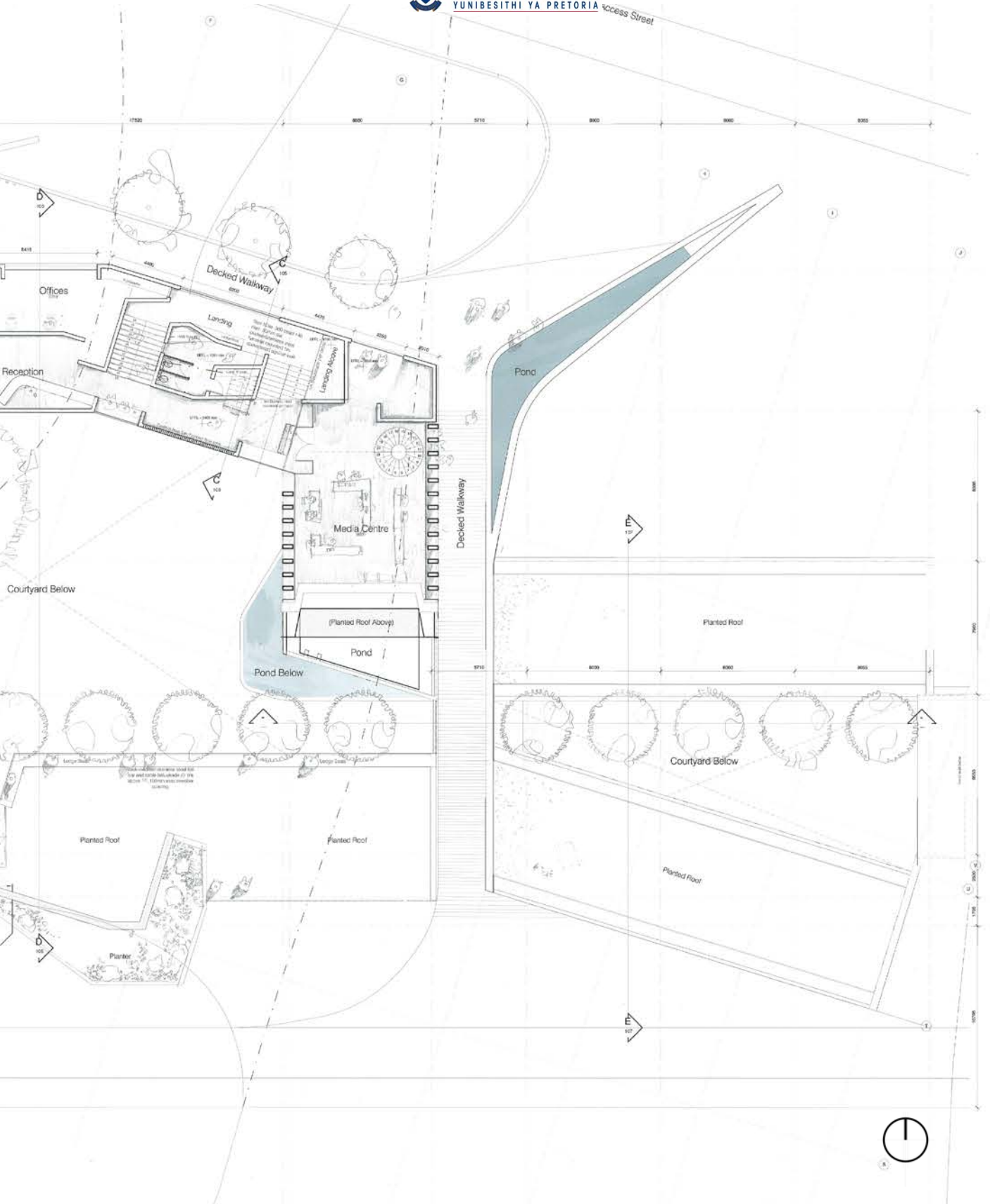


Figure 138 Finalised Ground Floor Plan (NTS)



10.2.2. First Floor Plan





10.3. Interaction

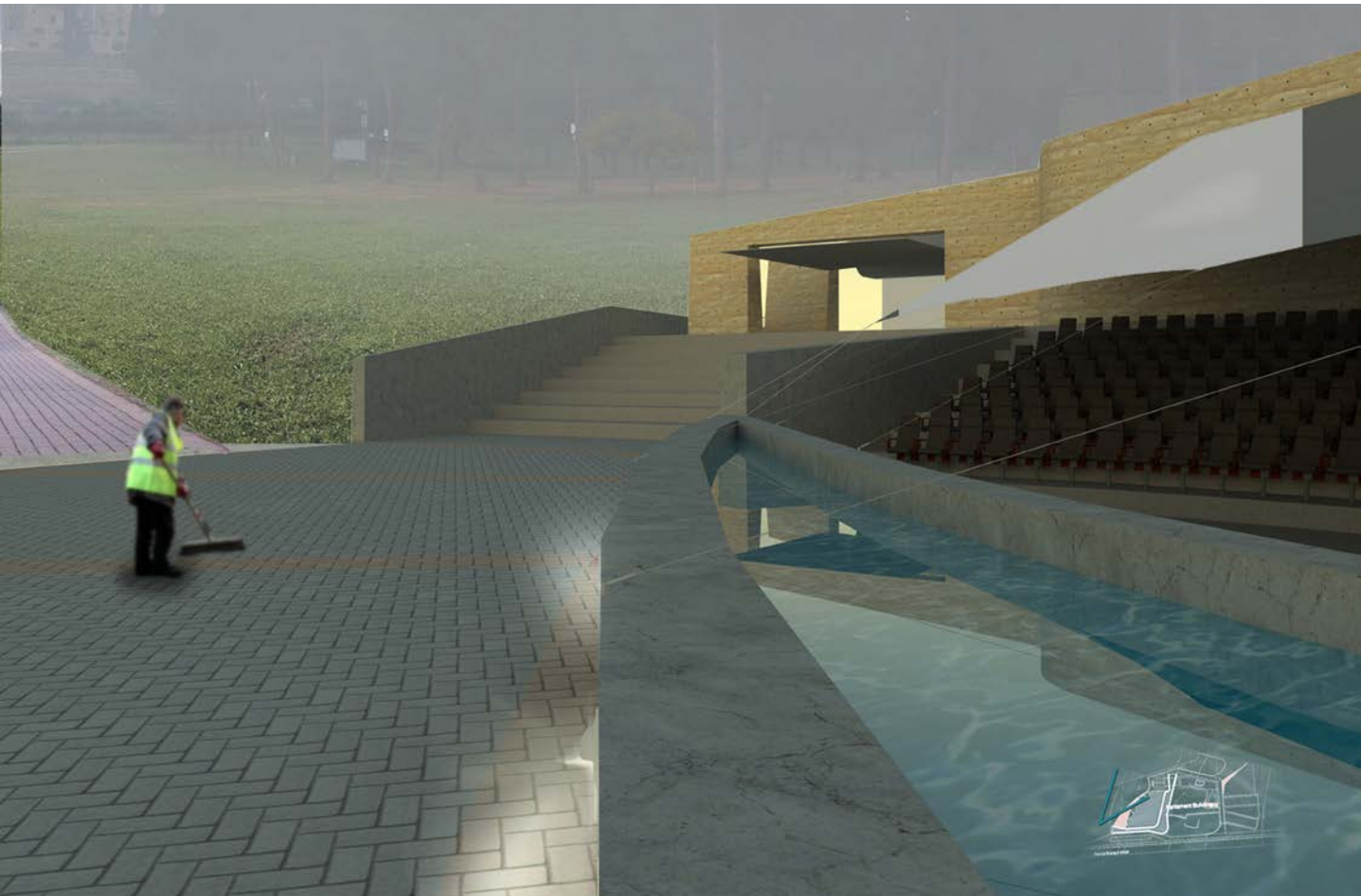




Figure 140 - A quiet morning outside the parliament chamber

Figure 141 - Protest has broken loose

(computer generated impressions, graphic collage)

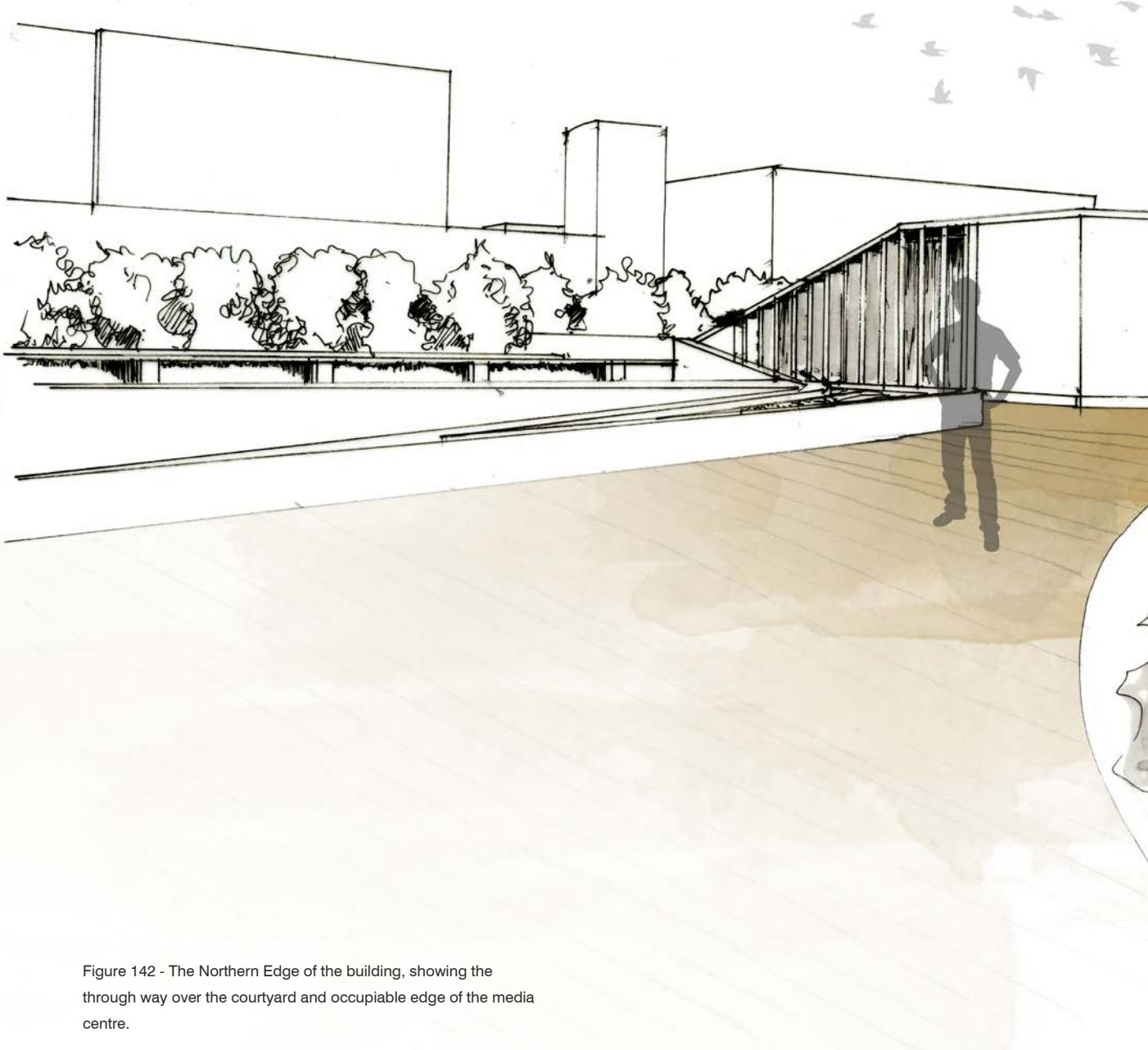
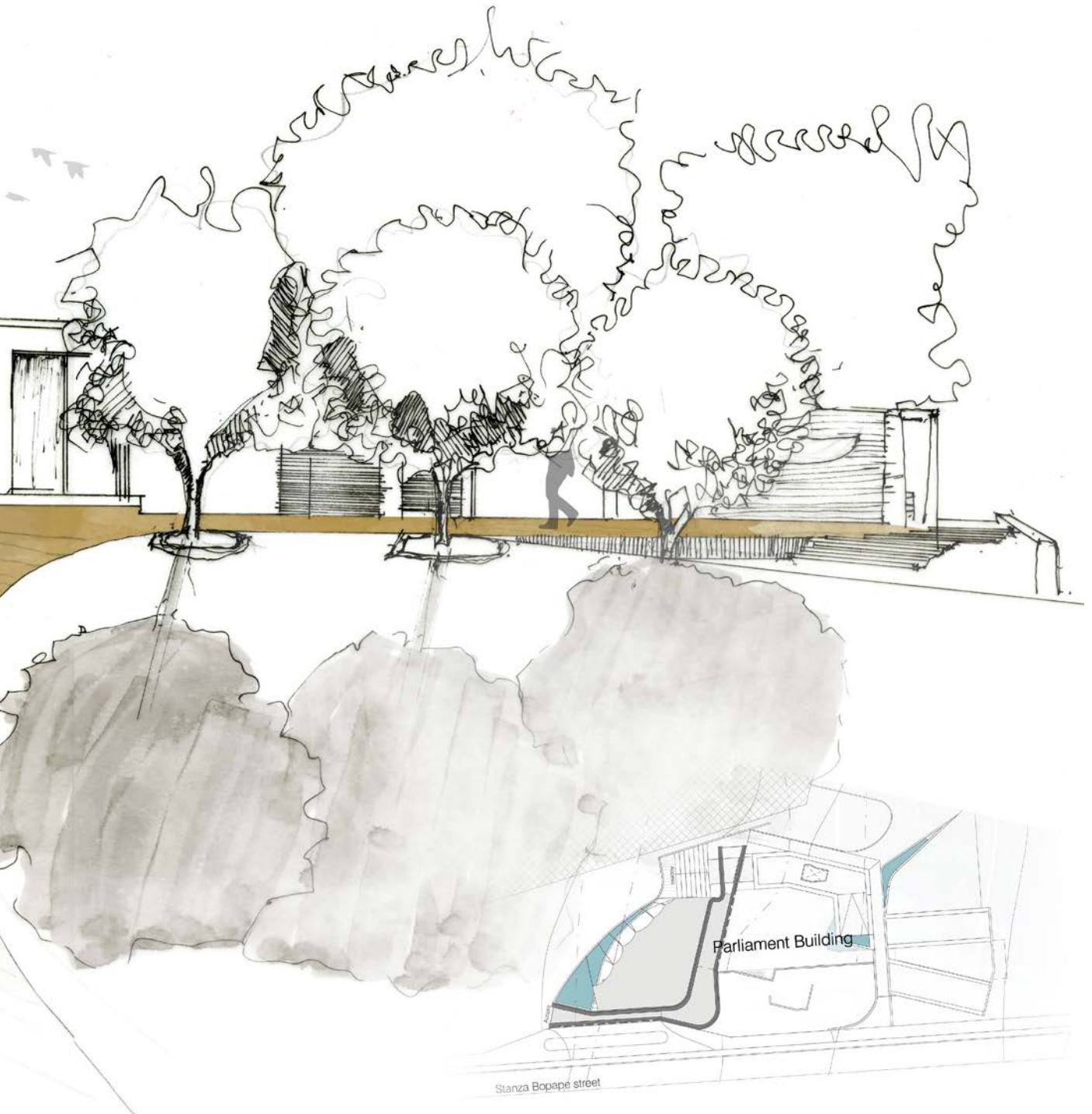
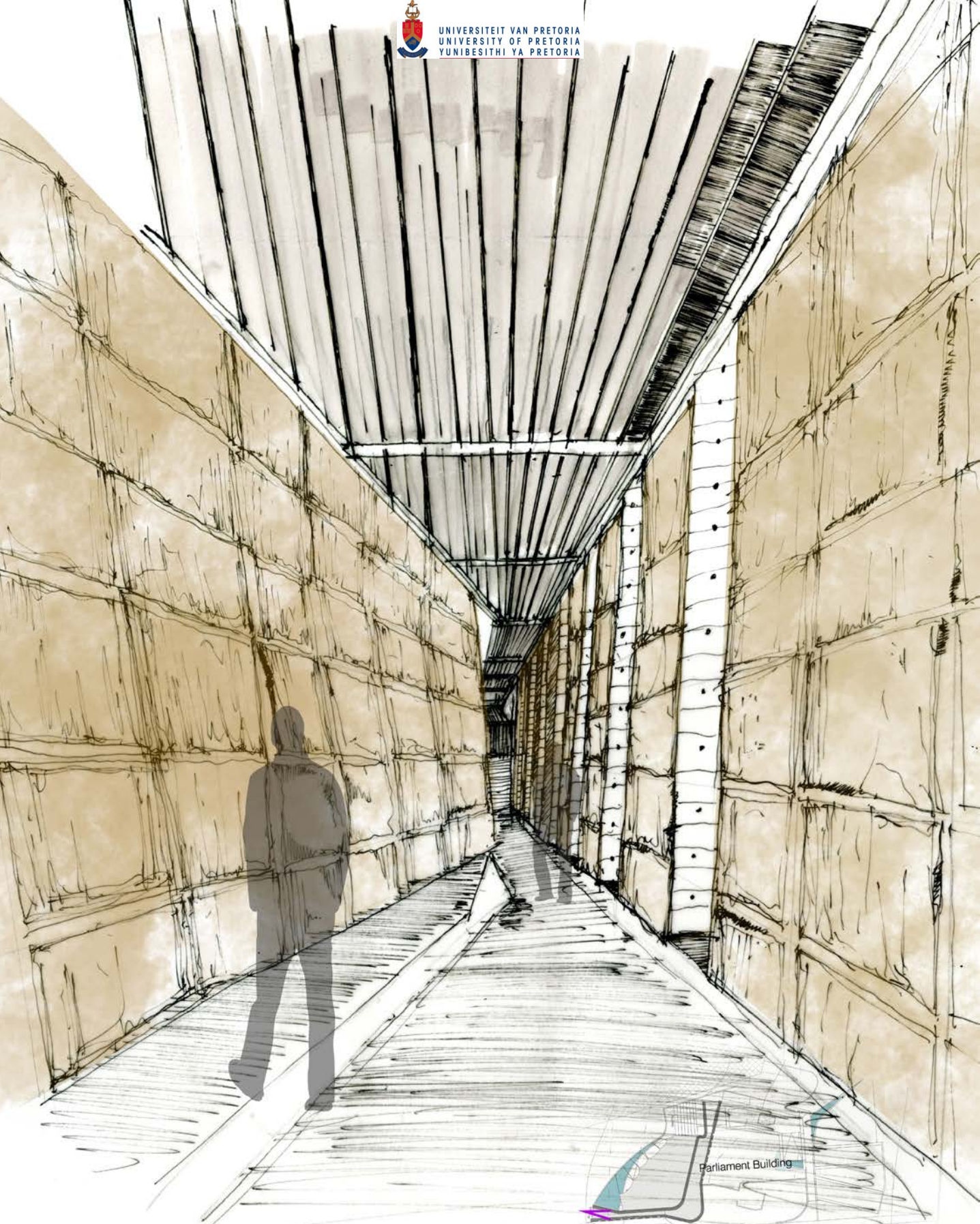
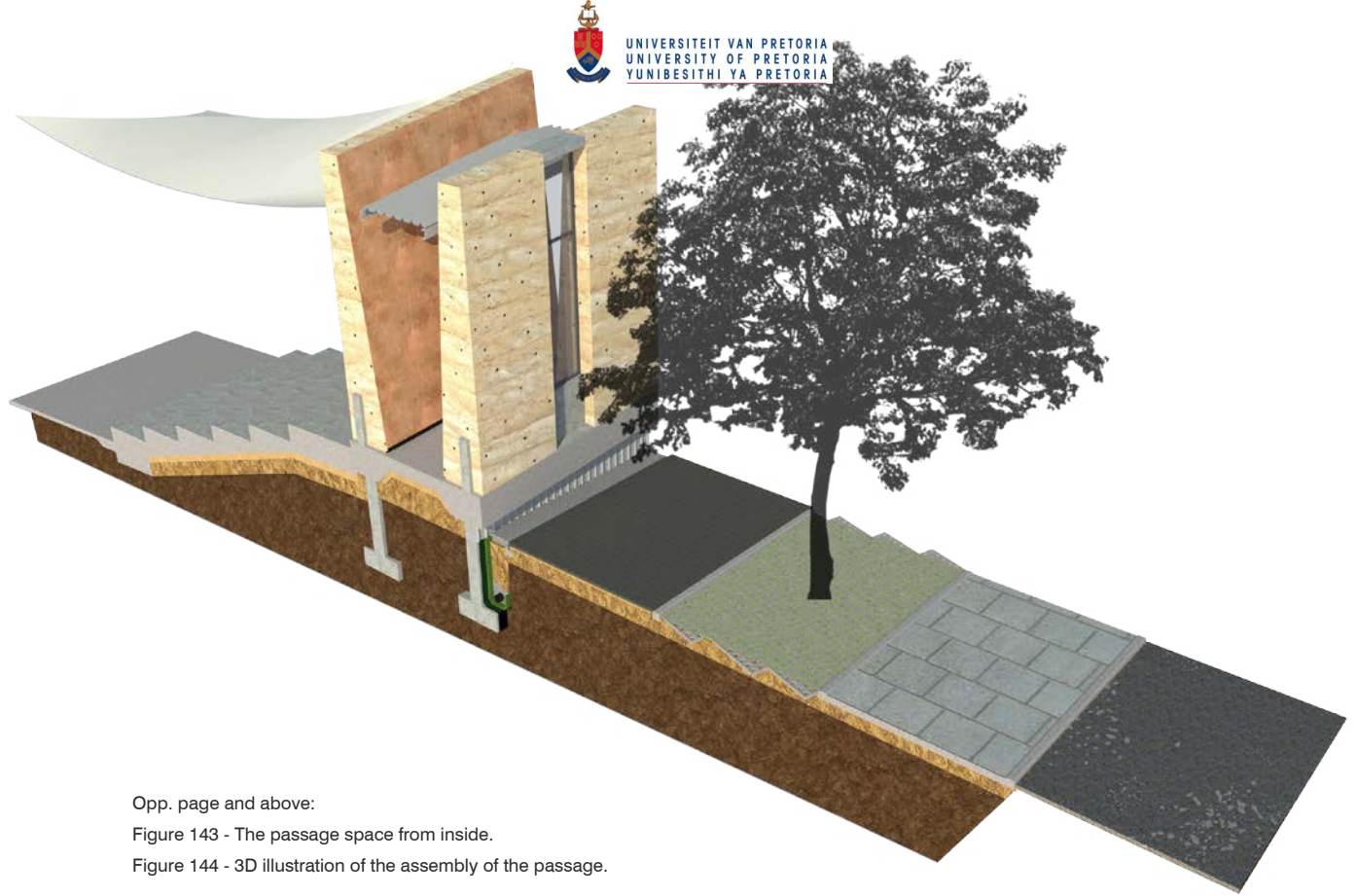


Figure 142 - The Northern Edge of the building, showing the through way over the courtyard and occupiable edge of the media centre.







Opp. page and above:

Figure 143 - The passage space from inside.

Figure 144 - 3D illustration of the assembly of the passage.

10.4. Liminality of Junctions: Processional Entrance & Passage (Section BB)

The passage was developed with attention given to the edges of planes and materials. The intention was, again, to interrogate how different planes touch each other and how different junctions are mediated.

The floating roof above the passage is pulled away from the walls, and echoes the lines of the floor, which leaves it floating away from the walls where it is suspended, because of the tapering nature of the walls. This gives the impression that it belongs to the floor and not to the walls. The grey colour of the chromadeck coated sheeting (left exposed and without ceiling, also mirrors the floated concrete below. The floor and roof plane become an enveloped for those within. The walls, that do not meet the roof or the floor (by means of steel skirting detail) become the guiding element that houses the space laterally. This implies guidance and stability, which is exploited by the narrowness of the space - the implication of forced contact and interaction remains clear.

The edge condition of the passage was criticised for its poor space-making on street side, however, this was intentional. The space on street side is designed to become a quick transitional zone. The slotted windows in the rammed earth wall also make the internal space one where only fleeting glances of figures on the other side become possible. This renders users inside and outside as anonymous to each other - their identities are not important, rather their presence as part of the agreement between parliamentarian and public is important.

The profiled off-shutter concrete edge of the parliament passage is a detail repeated throughout - the vertical emphasis reminding those outside the building of the functions below. The lines appear to pull the ramp towards the ground, to which it belongs.

Figure 145 - Section BB, through the passage into the discussion chamber.



1m high black-oxidised stainless steel ballustrade with flat bar profiles and cable members. Balluster placement at 1000mm C/C. Minimum member spacing of 100mm. Holes for cables pre-drilled at 940mm centres, tension adjustment mechanisms at least at every fourth balluster.

Mezzanine floor finish to be of power-floated screed, at 25mm min. thickness, sloped towards edges. Steel profile drip along inner soffit edge.

Rammed earth (no pins)

1220 1210 1210 1210 1215 1205 700

Slip-joint

Waterproof admixture RC amphitheatre stairs cast in situ using stepped shuttering on 150mm layers compacted earth, 2 layers 250 micron damp-proof membrane with 150mm overlaps, covered by 25mm min layer of sand-blinding

Black-oxidised 50x75x50 T-section profile stair nosing, bolted to stair edge using chemically anchored bolts through pre-drilled holes. Screed flush with top edge.

50 x 50 x 2.5 black-oxidised skirting type drainage channel, bolted to surface using chemically anchored bolts.

Screed to fall, towards drainage channel

Durable auditorium seating fastened to stairs using chemically anchored bolts

100mm RC surface bed with thickened edges on 25mm sand blinding covering 250 micron polyethylene damp proof membrane with 150mm overlaps.



10.5. Occupied Circulation: The Office building stairwell (Section CC)



Figure 146 - Section CC through the stairwell of the building. The development of the section hoped to translate traditional transient spaces like stairwells into occupied spaces - transforming spaces that are traditionally left to passing commentary into social spaces where the debate and discussion happens within earshot of all of the building's occupants.

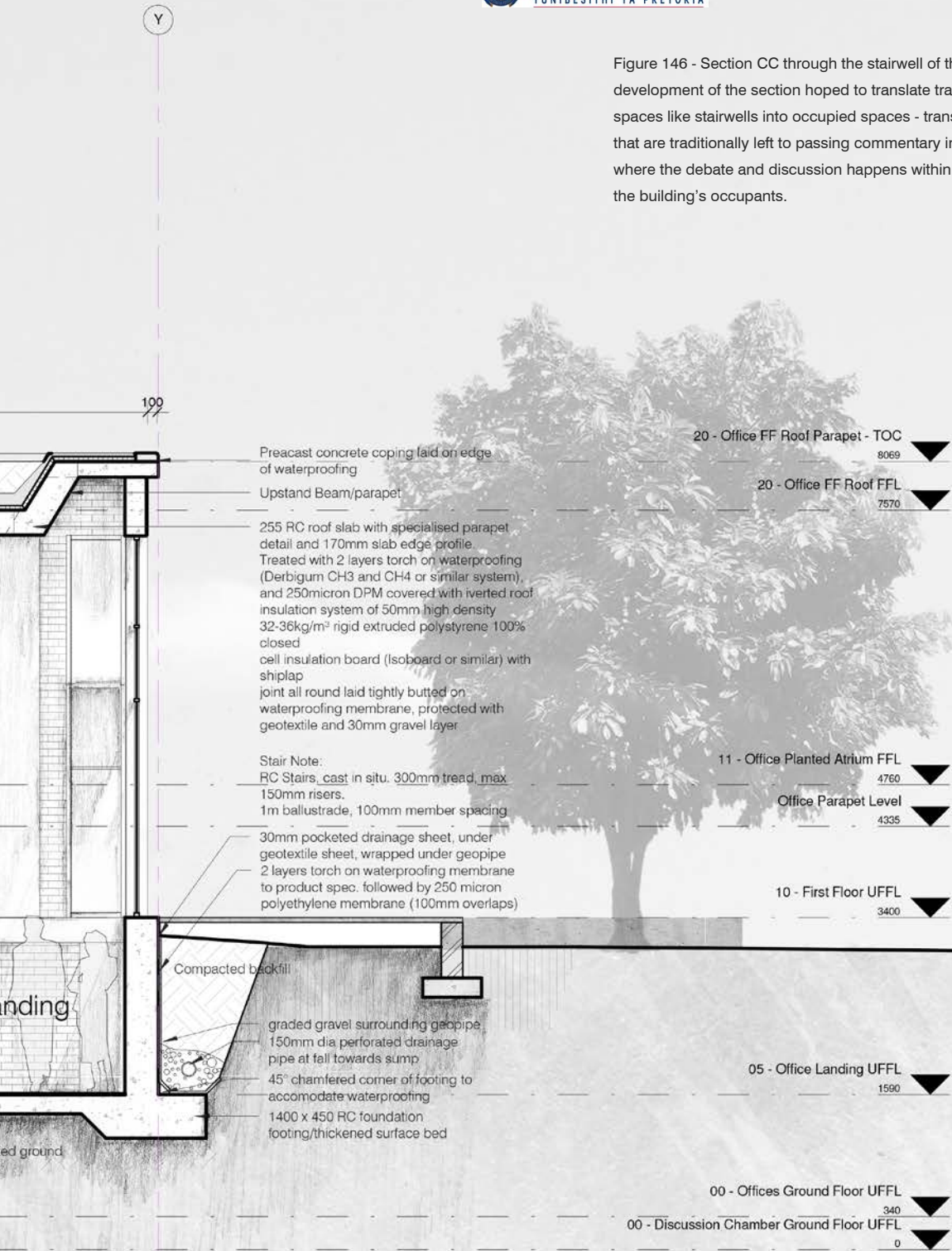




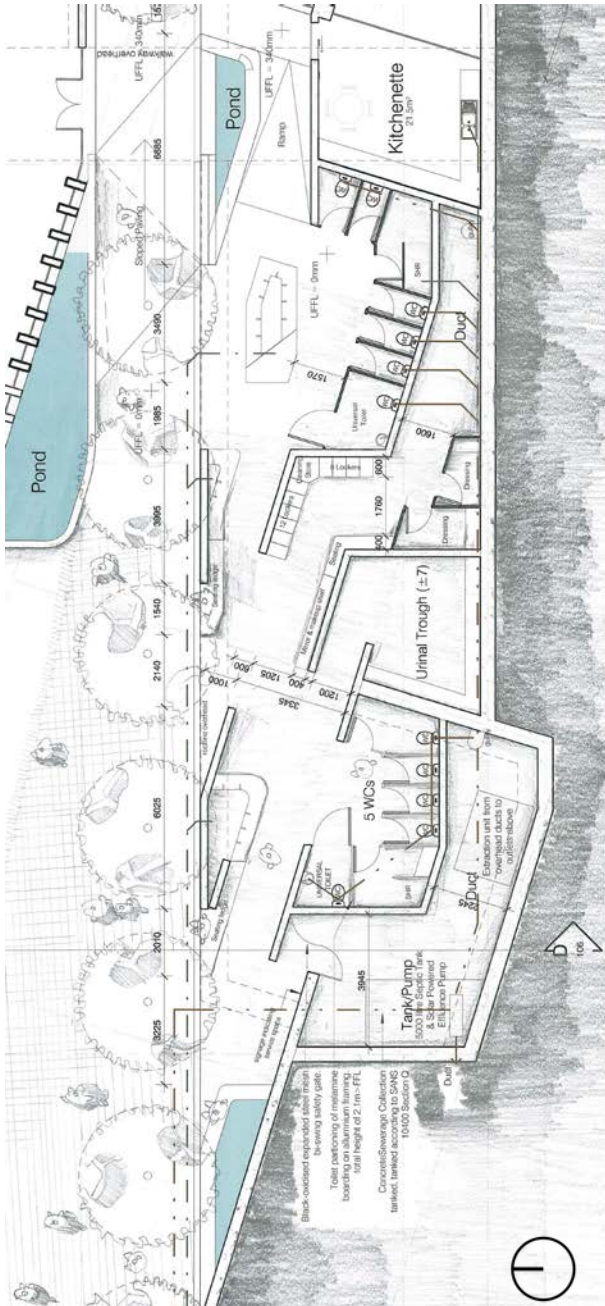
Figure 147 - Section through the 3D model cut at Section CC, showing the reverse.

Figure 148 - The Section illustrates the occupation of the landing as third space, encouraging observation of the activities of others, again focussing on the idea of accountability and the interplay between privacy and accessibility to information.





10.6. Privacy vs. Access: Democracy of the toilet



The resolution of the toilets developed from numerous iterations of the transitional spaces in between the physical accommodations of traditional toilets. The line between privacy and publicness was interrogated and resulted in the layout being opened up onto the courtyard, allowing minimal private spaces despite where absolutely necessary.

The ritual of cleansing post ablution became a public activity where eye contact between users becomes more likely. The implementation of trough basins and urinals and the minimum legally allowed spacing between users in space.

Careful consideration was given to the legally allowed sizes for passages and thoroughfares, and the limits were pushed to create awkward points of conflict between users - despite the inherent openness of the facilities to the courtyard. These tensions between geometries and between users and building aimed to instil constant self-awareness in relation to self and others and space.

Opp. Page and above:

Figure 149 - The view back onto the main courtyard.

Figure 150 - The final proposal for the toilets' layout.

10.7. Surveyed Democracy: The courtyard



Figure 151 - The main courtyard of the building.

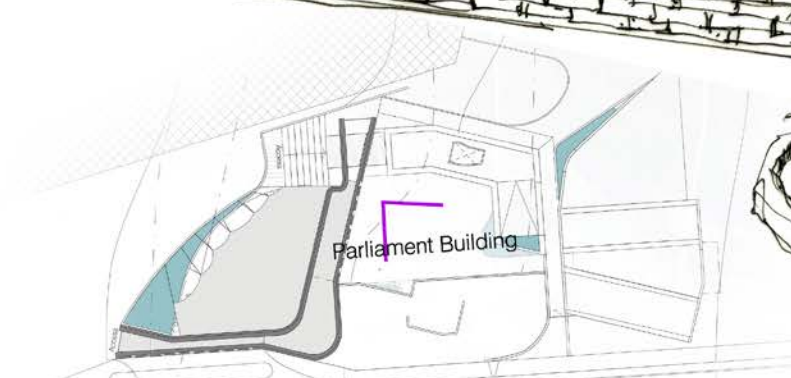
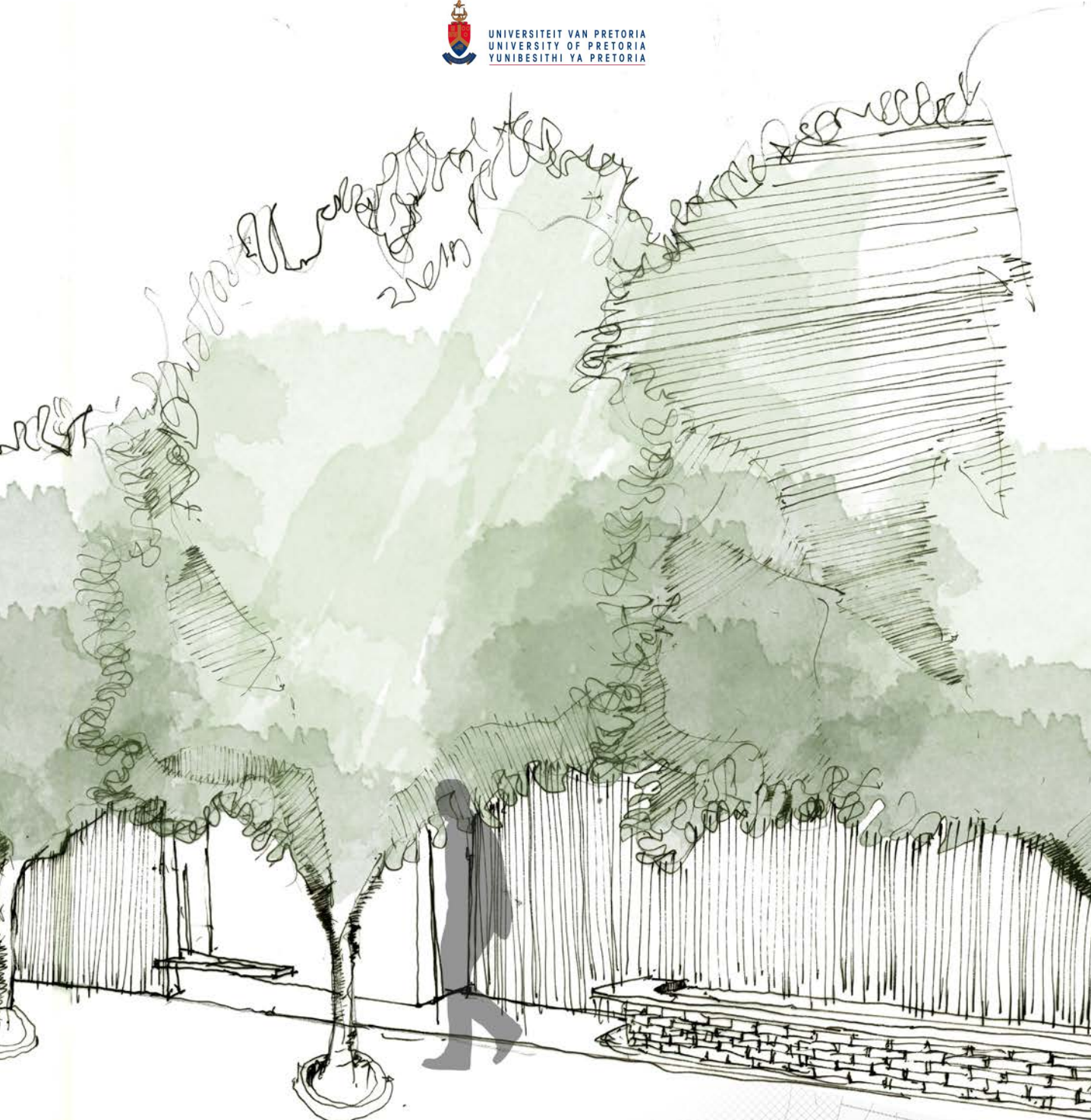
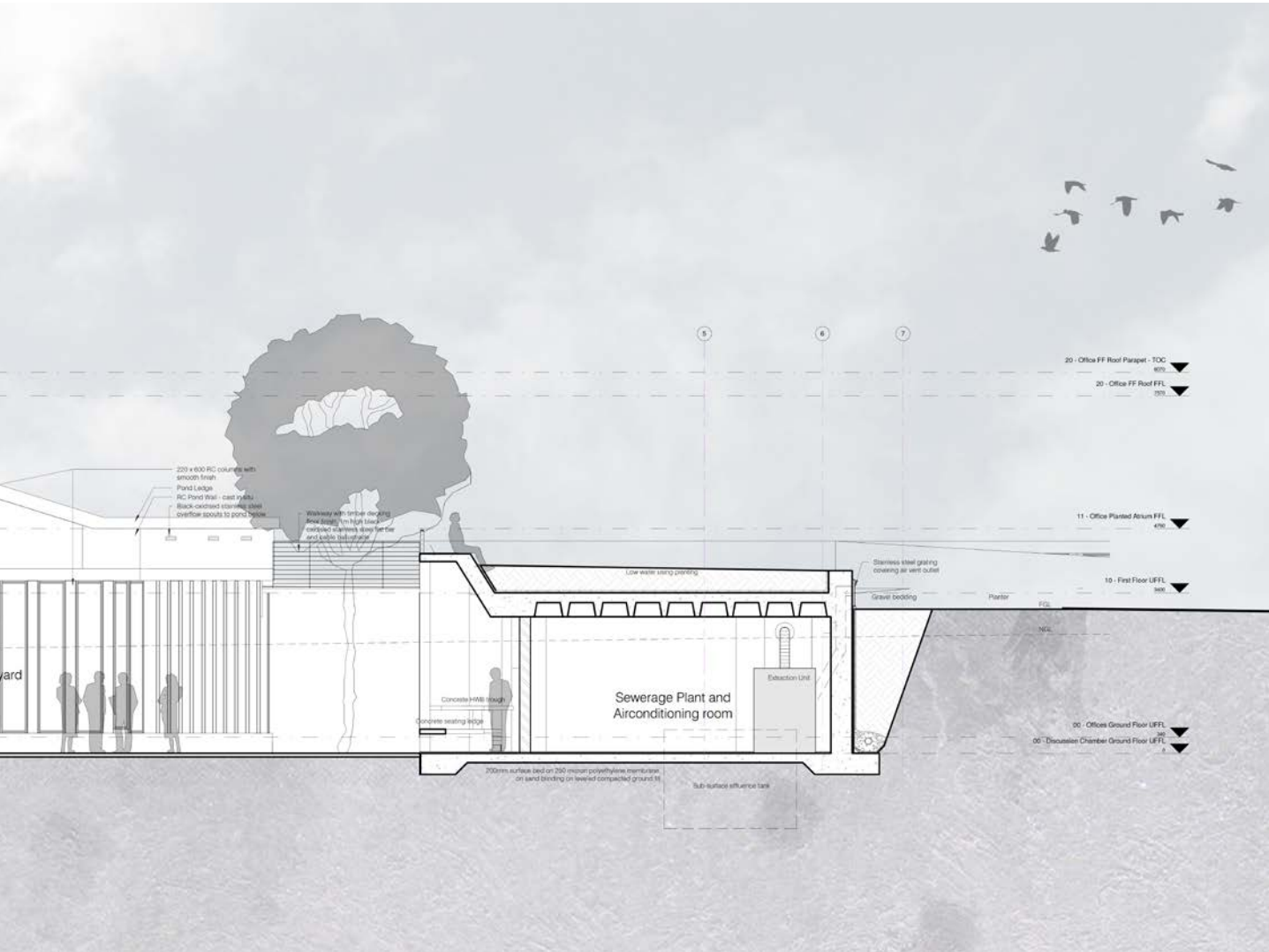




Figure 152 - Section DD cutting through the courtyard, and the water and sewerage tanks located South and North of the courtyard.

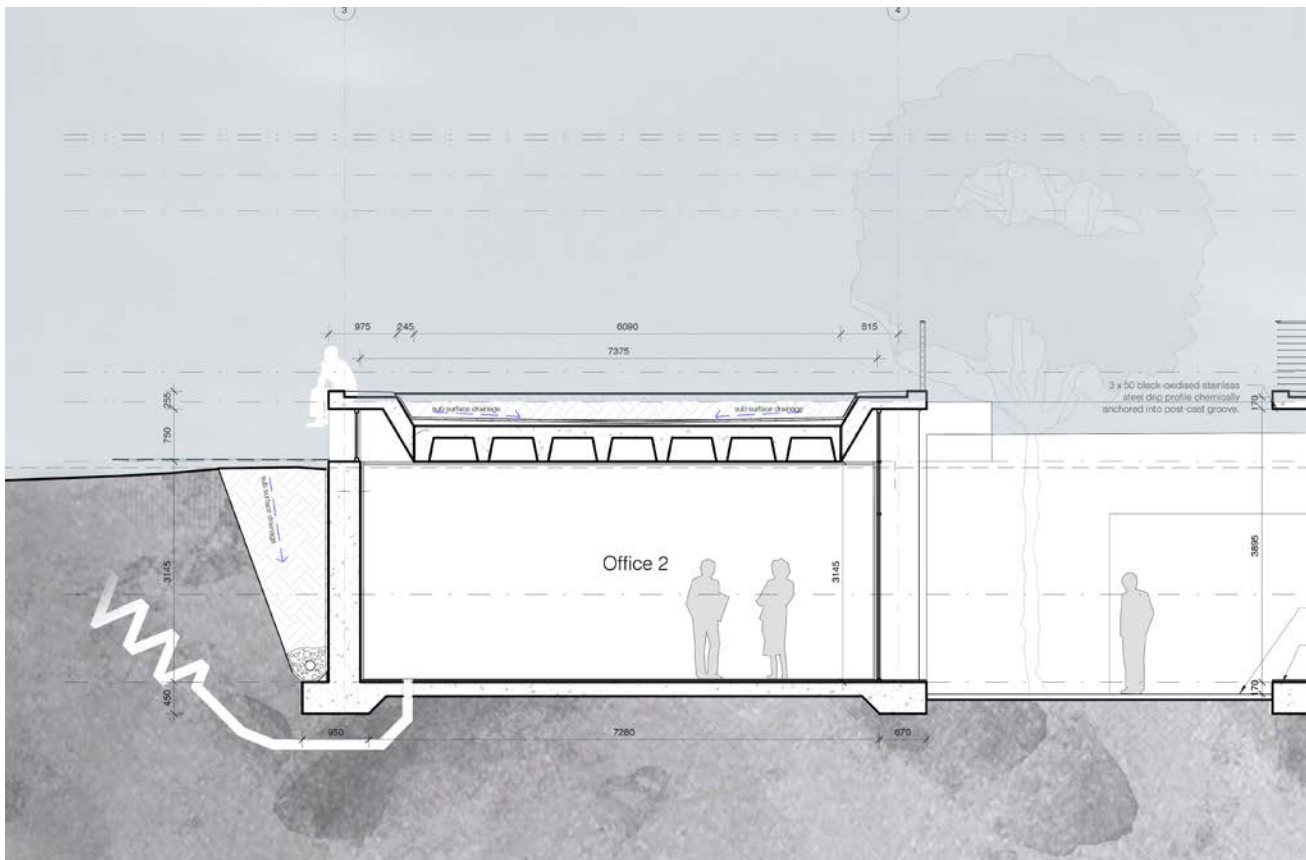


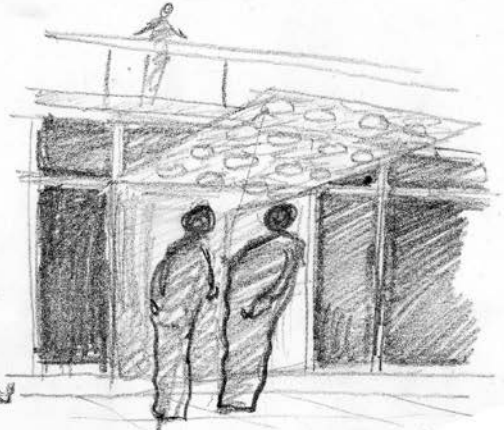
10.8. Surveyed Democracy: Office Space

Opp. page and below:

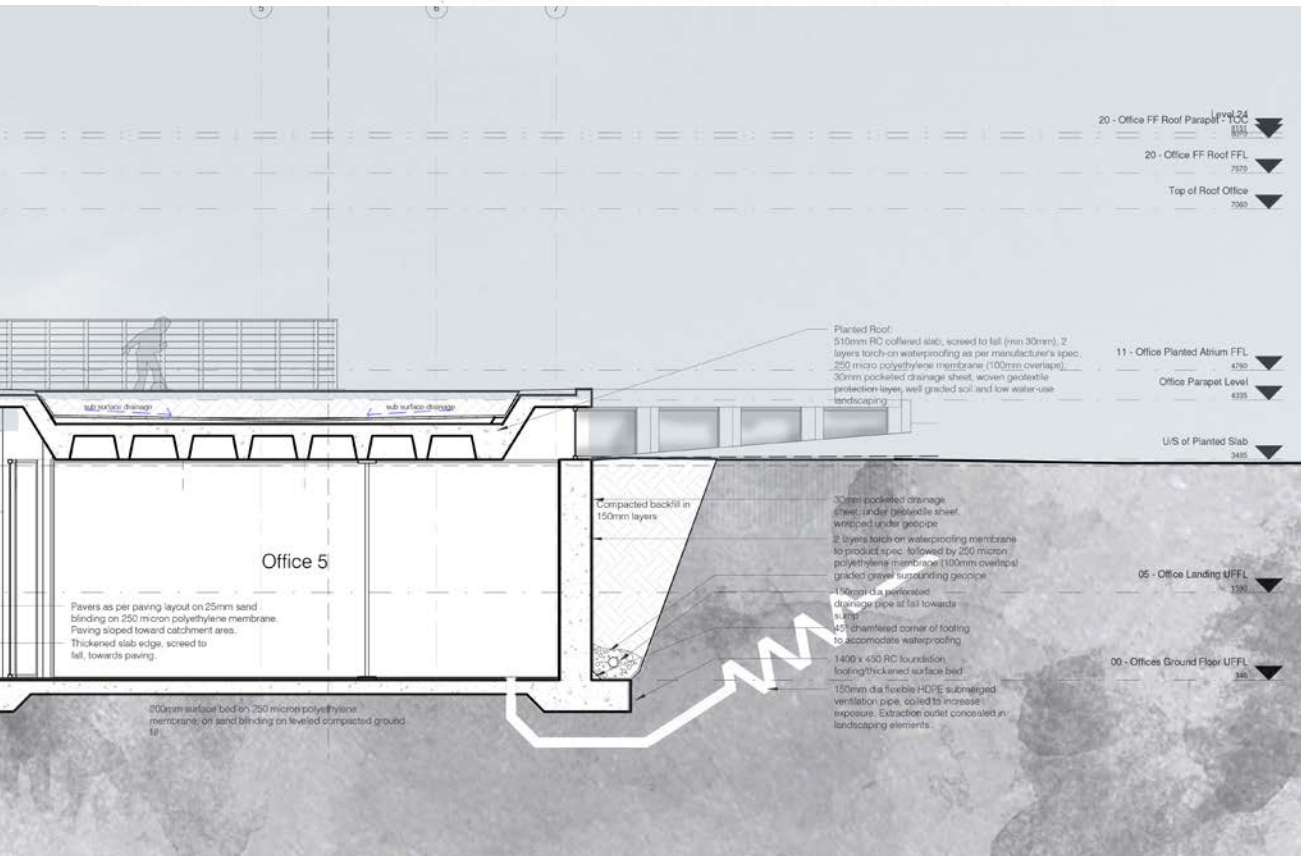
Figure 153 - Sketches illustrating the development of the character of the courtyard in the office wing.

Figure 154 - Section EE, through the office wing and courtyard.





Overhead screen =
Impression of privacy - likelihood of pause and discussion increases.
Shading device - of facade and courtyard
Device to show occupancy - those above can see when people are working below
Security - upswung steel louvred screen can act as security gate when in closed position.



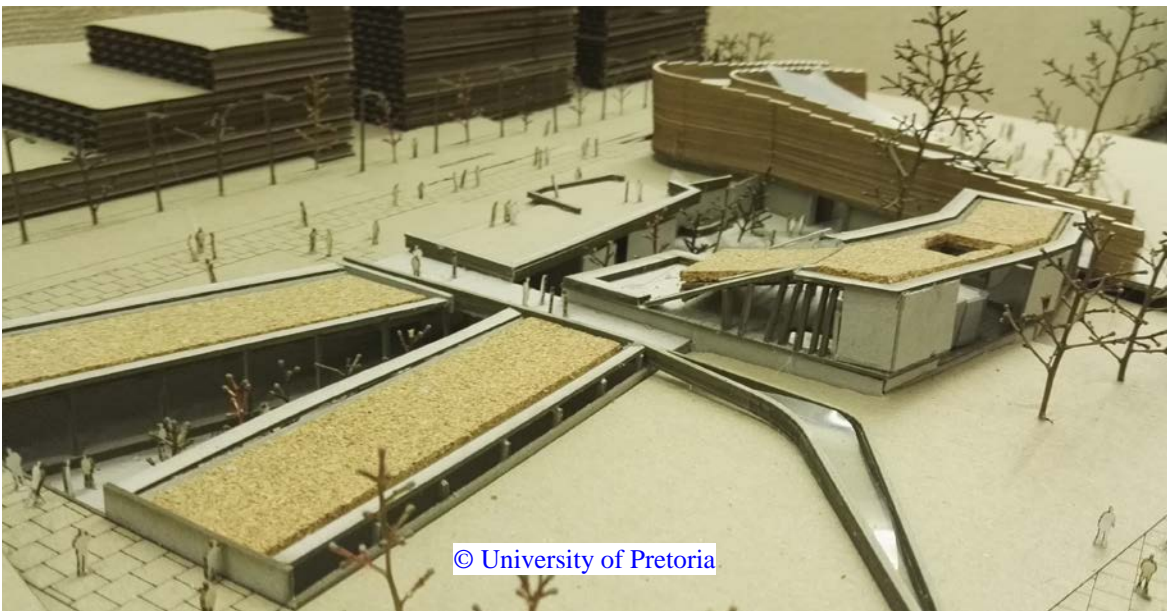
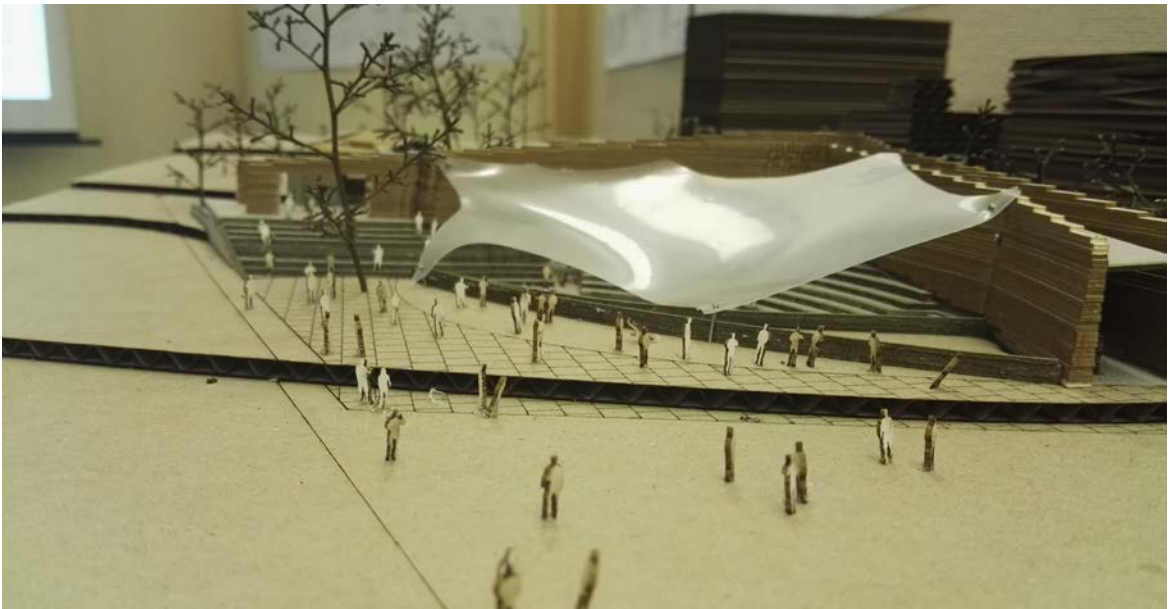
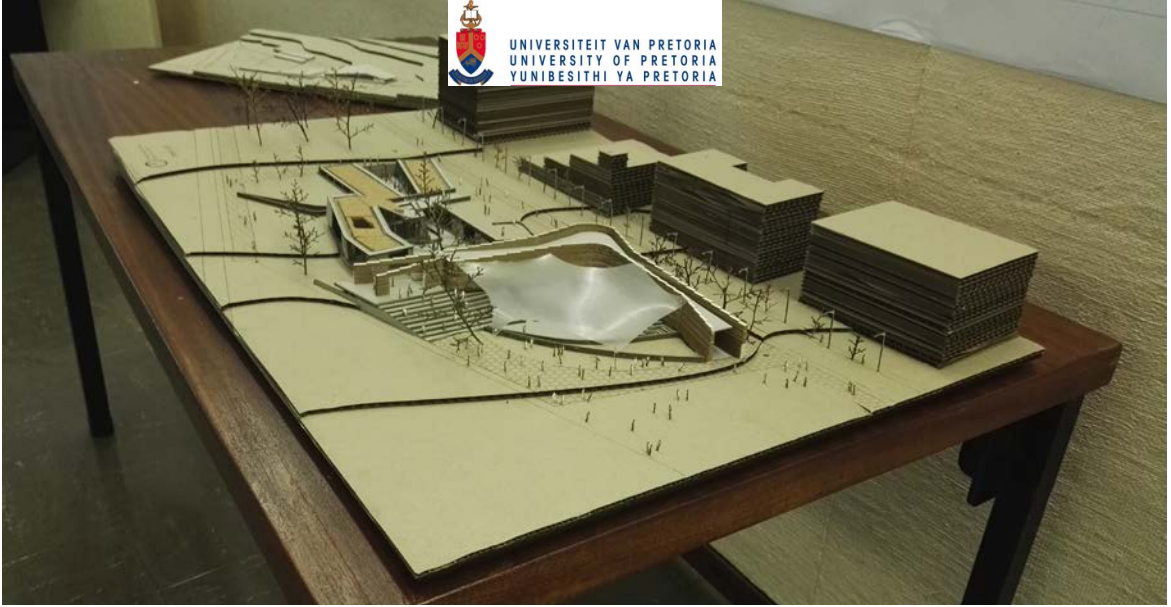
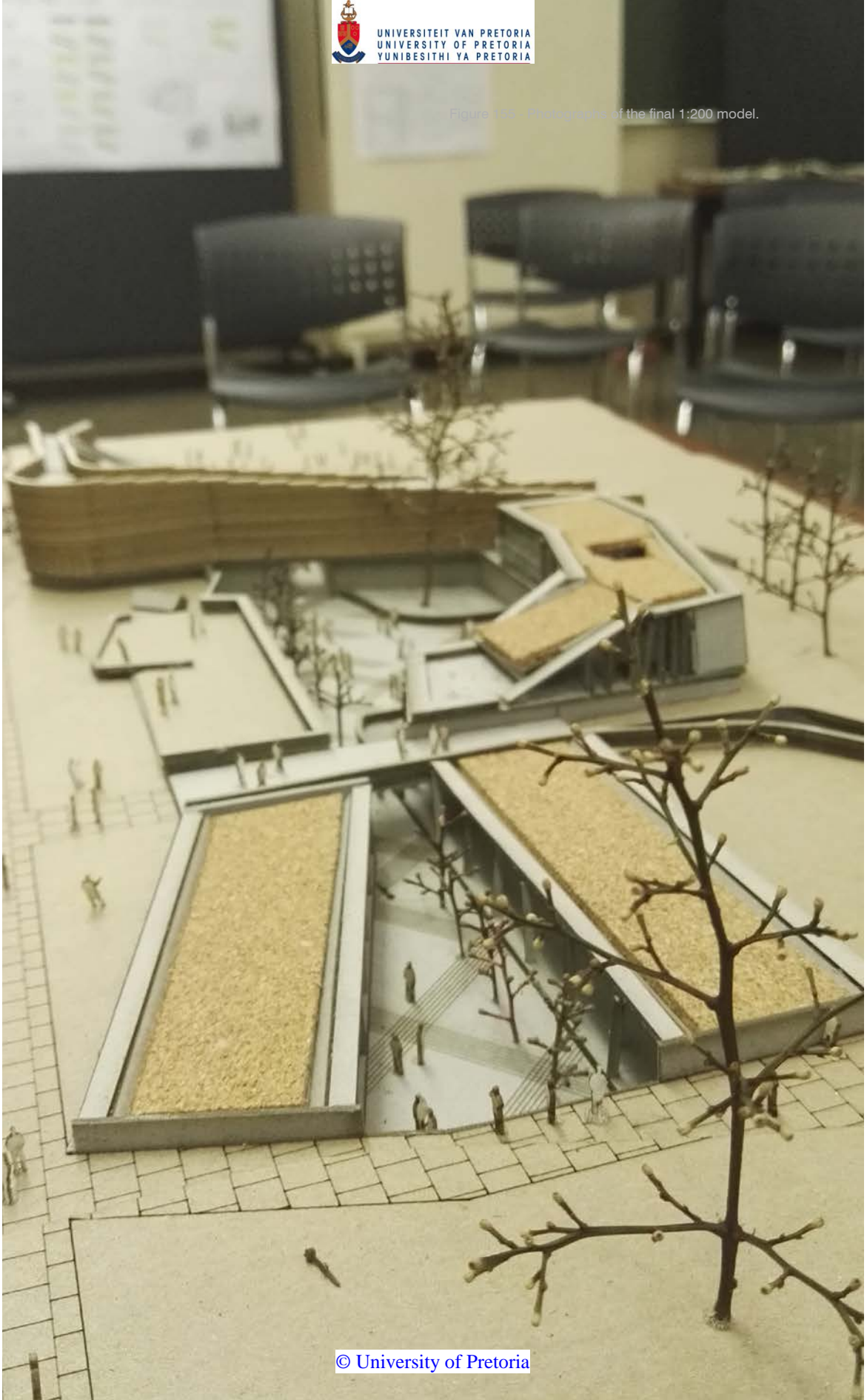


Figure 156 - Photographs of the final 1:200 model.





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Chapter 11:
POSTSCRIPT



In conclusion

During my architectural education I have often been reminded that architecture cannot be used as a tool for social engineering. Reared as architectural student in a school that prides itself on a regional approach, another reminder was always of the importance of context. Despite the success of the second message in my education, the first has always been a fine line that I fondly dwell very near to.

South Africa is littered with unrest and volatility presently. At the departure of this scheme things had slowed after a personal experience of the turmoil watered a seed that had been planted when the only architecture I practiced was with Lego.

“I refused to write about the flight of a bird or growing of a flower (during apartheid). I could not write about that when people are being killed by the system.” James Matthews, South Africa Struggle poet (Kamaldien 2016)

I concede that architecture is not a tool for social engineering, at least not in such direct terms. However, architecture, in times of strife and turmoil both socially and environmentally, can no longer afford to be reduced to a practice of the wealthy, where displays of aesthetics allow it to remain absent from discussions of transformation and radical accountability. Architecture, and architects, need to begin engaging with the issues at hand and create environments that serve an ever-changing society.

As outlined by Da Costa and van Rensburg (2008), bricks and mortar cannot change the lives of people. It is in the programmatic accommodation of our buildings that we fulfil our roles as architects. We cannot simply design buildings that introduce form to pre-determined function; it renders us no more than the draftsmen of others' dreams.

The division between formal and functional issues in architecture diminishes the engagements of architects with issues of power... This division between form and program is an ideological division which is ultimately untenable. It serves to sustain the illusion that architecture can be practiced in a realm of autonomy from social power (Dovey, 1996: 27-28).

In the investigation undertaken herein, I have kneaded issues of my time using the skills of my trade. I have hoped to uncover the realities of what it is South Africans want (democracy) and identified where it lives (public space). I have acknowledged where it plays (parliament) and tried to establish an interplay between these elements on a site that is rife with contestation and conflict. By acknowledging the mundane life of democracy and the extraordinary expectations people have from it, I have hoped to identify the position of architecture within the discourse.

Besides the intricacies of liminal spaces in the programme and theoretical continuum at hand, the value of designing occupiable liminality far surpasses this scheme. By designing liminal spaces; toilets, sidewalks, passages and façades, in a manner that declares them occupiable, we manage to include the 99% as clients of our buildings. This renders architecture the playground for all of humanity, so that our public buildings and spaces become truly public once more.

The realization of this scheme, as with any other addressing a theme that is continually in flux, has raised as many questions as it has answered. It has certainly fueled a curiosity that has burnt for as long as I can remember and has fostered the tools needed to further investigate and experiment.

Opp. page:

Figure 156 - Photographs of the final examination 22 November 2016.



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REFERENCES

11.1. List of Figures

Figure 1 - <i>Liberty</i> (a work by graffiti artist, Faith47) , Cape Town (photograph by author, 2012)	xii
Figure 2 - The moving container of democracy (diagram by author, 2016)	2
Figure 3 - The 9m tall statue of Nelson Mandela was introduced to the site on reconciliation day in 2012 (Author, 2015)	5
Figure 4 - The South African flag is a daily part of children's lives, the <i>rainbow-washing</i> of a very unresolved story (CNN, 2013)	9
Figure 5 - A delapidated farm structure at the Moralettakloof Nature Reserve (Author, 2016)	10
Figure 6 - A linocut print depicting the Western view towards the Union Buildings (undated) by JH Pierneef	14
Figure 7 - 1909 plan showing baker's intention for the grounds. (Baker 1909 in Muller & Young, 2005)	16
Figure 8 - An early sketch of Baker's intention for the Union Buildings (25 June 1909) (Baker, 1909 in Christenson, 1996)	17
Figure 9 - A series of schematics (plans and aerial photographs) showing the changes from intention to present day of the Union Buildings Estate.	18
Figure 10 - The Union Buildings make for an impressive backdrop to extreme sports events (Primi Piatti 2015)	21
Figure 11 - (Vandalised signage near the pedestrian gate from Stanza Bopape street (Author 2016)	21
Figure 12 - The view from behind the fence (Author 2016)	21
Figure 13 - The safe side of the fence during #FeesMustFall (SABC, 2015)	23
Figure 14 - The other side (SABC, 2015)	23
Figure 15 - Photographs of the streets surrounding the triangle at the base of the grounds, Stanza Bopape street and Madiba Street. Taken at sunrise, and already the streets are abustle (Author 2016).	23
Figure 16 - Students storm the gates of Parliament, Caoe Town (October 2015) (BBC 2016)	33
Figure 17 - The intersecting scales contained within democracy (Author's diagram 2016)	34
Figure 18 - The British parliamentary system has been the benchmark for parliamentary systems worldwide (Author's diagram 2016)	36
Figure 19 - A more contextual example of a hybrid system of traditional governance and colonially established systems can be found in Botswana (Author's diagram 2016)	36
Figure 20 - France embodied the power of individuals by overthrowing the monarchy during the French Revolution (Author's diagram 2016)	37
Figure 21 - Iceland underwent a similar revolution which implemented the media of our era and served as an example for the power of the people today (Author's diagram 2016)	37
Figure 22 - South Africa's recent political history is marked with the exclusion of the majority, the revolutions and international boycotts that lead to the abolishment of Apartheid and the introduction of universal suffrage. Presently, the country identifies as democratic which is both reason for the current displays of political unrest and reason why these displays can occur. South Africa's democratic definition is in flux (Author's diagram 2016).	39
Figure 23 - The plan of the British Houses of Parliament at Westminster	40
Figure 24 - The spatial syntax diagram of the British Houses of Parliament at Westminster	40
Figure 25 - The plan of the temporary Australian Parliament building in Canberra	40
Figure 26 - The spatial syntax diagram of the temporary Australian Parliament building in Canberra	40
Figure 27 - (opp. page) An aerial photo showing the <i>new</i> Australian Parliament House	43
Figure 28 - (above, left) A diagrammatic plan of the <i>new</i> Australian Parliament House	43
Figure 29 - (above, right) The spatial syntax diagram of the <i>new</i> Australian Parliament House	43
Figure 30 - (right) The spatial syntax diagram of a typical office suite in the <i>new</i> Australian Parliament House	43
Figure 31 - The inside of the courtroom from the public gallery (Author, 2016)	47
Figure 32 - An installation in the prison museum showing the daily rations of prisoners and the condition of the plates they were fed on (Author, 2016)	47
Figure 33 - The slotted concrete roof of the entrance foyer to the court. One of the less successful conceptual intentions of the project, the slots and slanting columns are meant to mimic the conditions of meeting below a tree to discuss events and governance in African tradition (Author, 2016)	47
Figure 34 - What makes a great place (PPS.org n.d.)	50
Figure 35 - The boulevard at Plaza Hidalgo is mainly a pedestrian thoroughfare along which some visitors rest on shaded benches.	52
Figure 36 - The Fountain of Coyotes is at the centre of the precinct acting as both beacon and meeting point. (Datter 2009)	52
Figure 37 - Diagram showing the increased likelihood of interactions between people because of the various destinations and activities in the park.	52

Figure 38 - Daigram illustrating the generation of the parliamentary precinct programme	55
Figure 39 - Henry Freeman's original design (Cusack 2009)	56
Figure 40 - Parliament House shortly after completion in 1884 (n.a. 2013)	56
Figure 41 - Diagram illustrating the original building (Cusack 2009)	57
Figure 42 - Diagram illustrating the additions to the original building (Cusack 2009)	57
Figure 43 - Distorted view of the National Assembly chamber (Bothma, 2016)	59
Figure 44 - A less peaceful moment in the Assembly Chamber (Maduna 2016)	59
Figure 45 - The National Council of Provinces (Zhao 2010)	59
Figure 46 - Students use the Nalson Mandela bust as shelter during police fire outside of parliament (livemag 2015)	61
Figure 47 - Blade Nzimande behind the gates of the parliamentary precinct when students stormed the site in October 2015 (Bennet, 2015)..	61
Figure 48 - An artwork from the Constitutional court collection, Johannesburg, South Africa (Photograph by author, 2016)	64
Figure 49 - Jason Nelson, a popular social media commentator outlines the psychology that drives people to acts of civil demonstration and protest (Nelson, n.d.).	68
Figure 50 - Keith Alexander's Black Eagle (Alexander 1991) is an example of his work depicting ruined structures surrounded by natural elements with an air of reverie in the relationship.	70
Figure 51 - (top) The Vietnam Veterans memorial is cut into the landscape, and its total height never leaves users feeling towered over (National Park Service, n.d.)	74
Figure 52 - (above) The Vietnam Veterans memorial is made of highly reflective marble, adding to its subtlety (Ake, 2013)	74
Figure 53 - A playful portion of the fountain (Grey, 2005)	75
Figure 54 - A slower portion of the Diana Memorial Fountain(Royalparks, n.d.)	75
Figure 55 - Marking the Berlin wall's location (Johnston 2012)	77
Figure 56 - The Peter Fechter Memorial (Ives 2015)	78
Figure 57 - An installation at the Berlin Wall Memorial (Beier 2010),	78
Figure 58 - A vandalised portion of the East Side Gallery (Thurn 1995)	78
Figure 59 - A portion of the Berlin wall left after demolition (N.A. 2010)	78
Figure 60 - Page from author's journal dated 22 March 2016. The lowest drawing shows the notion of the precinct as a series of objects through which protectors and the public move en route towards the Union Buildings.	80
Figure 61 - The working areas established for Newtown Landscape Architect's 2005 heritage audit on the Union Buildings Estate (Muller & Young, 2005:18) (Delimited precinct highlighted by author.)	82
Figure 62 - The spatial syntax of the proposed programme (Author's diagram)	84
Figure 63 - The Spatial Syntax diagram with liminal spaces highlighted (Author's diagram)	84
Figure 64 - Precinct design iteration 1. Manipulated from original explorations based on analysis of existing conditions, historic intentions and the requirements as set out in the project brief. (24 April 2016)	86
Figure 65 - A second iteration of the precinct proposal, with limited alterations from the first. (26 April 2016)	87
Figure 66 - Model illustrating the initial proposal for the precinct and a conceptual exploration of the building form determined by the site. (Precinct iteration 1; Building Concept) (26 April 2016)	89
Figure 67 - Photograph of the model built to illustrate Iteration 1 (May 2016), aerial view.	92
Figure 68 - Photographs of the model built to illustrate Iteration 2 (May 2016), aerial view and side view showing levels inside building	92
Figure 69 - Conceptual elevation of the second iteration.	92
Figure 70 - Overhead view of the model (Iteration 3)	94
Figure 71 - Oblique view of the model, showing the edge between discussion chamber and public amphitheatre.	94
Figure 72 - Section (NTS)	96
Figure 73 - Site Plan (NTS)	96
Figure 74 - Concept sketches of the market space	101
Figure 75 - Concept sketches of the market space	101
Figure 76 - Concept Sketches for the edge condition of the restaurant playground.	102
Figure 77 - Photographs of Richard Leplastrier's Public Ablutions in Sydney. Completed in 2004. (De Wall & Przywecki 2016)	103

Figure 78 - The Olympic Sculpture Park, Seattle. (Charles Anderson / Atelier ps, 2007) (Buchanan 2010)	104
Figure 79 - Nirox Sculpture Park, Johannesburg. (N.A. 2016)	104
Figure 80 - The Hillside Eco Park, Hunan China (Z+T Studio) (Zhang 2016)	104
Figure 81 - A conceptual illustration of the memorial (Author 2016)	105
Figure 82 - A conceptual section of a portion of the memorial (Author 2016)	105
Figure 83 - The main ordering systems imposed on the site are that of the union buildings (divine) and street (mundane).	107
Figure 84 - The marrying of the mundane (the people) and the divine (the value of democracy) creates an intersection, the location of the descent into parliamentary proceedings.	107
Figure 85 - The union of the two systems holds the discussion chamber, where it is in view of the public space, which acts as backdrop for parliamentary debate.	107
Figure 86 - The first attempt of attaching the office buildings and toilets to the main space.	107
Figure 87 - Iteration of the position of the offices, creating a lengthened courtyard encouraging spectatorship of, not only the formal proceedings but also the daily functioning of the parliamentarians.	107
Figure 88 - A photograph of the model illustrating an extrapolation of the plan developments	109
Figure 89 - Route of parliamentarians through the building	109
Figure 90 - Parts of the building accessible to the public physically (coloured region indicates where people are permitted).	109
Figure 91 - Model with relevant section highlighted	112
Figure 92 - Conceptual 3D exploration sketch of the corridor behind the assembly chamber	112
Figure 93 - Early conceptual section through the discussion chamber, corridor and courtyard.	112
Figure 94 - Model with relevant section highlighted	113
Figure 95 - Conceptual sketch of the entrance to the office building.	113
Figure 96 - Development of the section.	113
Figure 97 - Concept sketch of the office building showing the courtyards and terraced roofs.	114
Figure 98 - Early Concept sketch of the type of edge conditions and the opportunity of having lower spaces that the public can view activity from	114
Figure 99 - Concept sketch of the courtyard	115
Figure 100 - Exit from the chamber into the courtyard	116
Figure 101 - Development of the Ground Floor Plan (NTS), 22 September 2016	118
Figure 102 - Development of the First Floor Plan (NTS), 22 September 2016	119
Figure 103 - Explorative section through the entrance, highlighting location of details	124
Figure 104 - Exploration of the details of canopy connections to wall opening.	124
Figure 105 - Explorative section through the entrance, highlighting location of details	126
Figure 106 - Exploration of the details of canopy connections to wall opening.	126
Figure 107 - Section through courtyard showing office building staircase and toilets (NTS), September 2016	129
Figure 108 - Section through offices (NTS), 22 September 2016.	131
Figure 109 - Explorations of the slab edge overhead.	131
Figure 110 - Skylight detail (NTS), 22 September 2016	131
Figure 111 - The outcomes page from the SBAT (20 October 2016). With adjustment to certain aspects, the result may prove more apt.	132
Figure 112 - Diagram illustrating the water system in the building (Author's diagram)	136
Figure 113 - Plan (NTS) showing anticipated water catchment strategy from courtyard and assembly chamber floors	137
Figure 114 - Tables and graphs illustrating the anticipated yield from the maximum catchment area and the demand of the building by permanent staff. Rainfall data obtained from http://www.pretoria.climateemps.com/precipitation.php .	138
Figure 115 - Tables and graphs illustrating the sizing of the reservoir after reducing the catchment area.	140
Figure 116 - Sketch plan of building with offices highlighted	143
Figure 117 - The gradation key of the sDA visualisation.	143
Figure 118 - Conceptual section of the office spaces.	144
Figure 119 - Daylighting rules of thumb diagram	144
Figure 120 - sDA visualisation of the spaces.	144

Figure 121 - ASE visualisation of the spaces.	144
Figure 122 - Preliminary computer aided drawing showing the first Iteration of the conceptual section (Section EE NTS).	145
Figure 123 - Predicted diagram applying the rules of thumb for iteration 1	145
Figure 124 - sDA visualisation of the spaces after the first iteration.	145
Figure 125 - ASE visualisation of the spaces after the first iteration.	145
Figure 126 - Iteration 2, slight variation of iteration 1, where angle of internal walls of the skylight was altered to improve aesthetic and increased aperture (Northern portion of Section EE NTS).	146
Figure 127 - Predicted diagram applying the rules of thumb for iteration 2 - values extrapolated with discretion.	146
Figure 128 - sDA visualisation of the spaces after the second iteration. The change is only slight.	146
Figure 129 - ASE visualisation of the spaces after the second iteration.	146
Figure 130 - Iteration 3, where skylights were abandoned and clerestories introduced (Southern portion of Section EE NTS).	147
Figure 131 - Predicted diagram applying the rules of thumb for iteration 3, depth of luminance from the clerestory were under-exaggerated.	147
Figure 132 - sDA visualisation of the spaces after the third iteration. Almost full illumination was achieved.	147
Figure 133 - ASE visualisation of the spaces after the second iteration, no glare in the Southern building.	147
Figure 134 - Final Locality Plan proposal (NTS)	151
Figure 135 - Section of the Political interpretation memorial path.	153
Figure 136 - Finalised Site Plan (NTS)	155
Figure 137 - An aerial view of the scheme, illustrating the developed application of the ordering systems outlined on page 107. The image illustrates the relationship with public space, the building sitting unobtrusively in the public realm, with the liminal circulation space into the chamber becoming a beacon seen from afar, the passage will become the building's identifier, and its monumental ruin in event of its demise (NTS).	156
Figure 138 - Finalised Ground Floor Plan (NTS)	159
Figure 139 - Finalised First Floor Plan (NTS)	161
Figure 140 - A quiet morning outside the parliament chamber	163
Figure 141 - Protest has broken loose	163
Figure 142 - The Northern Edge of the building, showing the through way over the courtyard and occupiable edge of the media centre.	164
Figure 143 - The passage space from inside.	167
Figure 144 - 3D illustration of the assembly of the passage.	167
Figure 145 - Section BB, through the passage into the discussion chamber.	168
Figure 146 - Section CC through the stairwell of the building. The development of the section hoped to translate traditional transient spaces like stairwells into occupied spaces - transforming spaces that are traditionally left to passing commentary into social spaces where the debate and discussion happens within earshot of all of the building's occupants.	170
Figure 147 - Section through the 3D model cut at Section CC, showing the reverse.	173
Figure 148 - The Section illustrates the occupation of the landing as third space, encouraging observation of the activities of others, again focussing on the idea of accountability and the interplay between privacy and accessibility to information.	173
Figure 149 - The view back onto the main courtyard.	175
Figure 150 - The final proposal for the toilets' layout.	175
Figure 151 - The main courtyard of the building.	176
Figure 152 - Section DD cutting through the courtyard, and the water and sewerage tanks located South and North of the courtyard.	178
Figure 153 - Sketches illustrating the development of the character of the courtyard in the office wing.	180
Figure 154 - Section EE, through the office wing and courtyard.	180
Figure 155 - Photographs of the final 1:200 model.	183
Figure 156 - Photographs of the final examination 22 November 2016.	187

11.2. Print

- Alkayali, A.** (2011) *Liminal Public Infrastructure*. Pretoria: University of Pretoria.
- Baker, H.** (1909). *The Architectural Needs of South Africa*. **The State, May, Carr, S. et al.** (1992). *Public space*. Cambridge: Cambridge University Press. Cited in (Christenson: 1996).
- Baker, H.** (N.D) *Architecture and Personalities*, cited in **Radford, D.** (1988). Baker, Lutyens and the Union Buildings. *South African Journal of Cultural and Art History*, 2(1), pp.62 - 69.
- Bakker, KA & Muller, L.** 2010. *Intangible heritage and community identity in Post-Apartheid South Africa*, in *Museum International*, Vol 245, No 246. Cited in (Grobbelaar, 2012).
- Bekker, S. and Therborn, G.** (2012). *Capital cities in Africa*. Cape Town, South Africa: HSRC Press.
- Bellah, R** (1967) 'Civil Religion in America', *Dedalus* 97/1, pp.1.21. as cited in **Gentile, E.** (2005). Political religion: a concept and its critics – a critical survey. *Totalitarian Movements and Political Religions*, 6(1), pp.19-32.
- Christenson, E.** (1996). Herbert Baker, the Union Buildings and the Politics of Architectural Patronage. *South African Journal of Cultural and Art History*, 6(1-4), pp.1-9.
- Cusack, A.** (2009). *The Houses of Parliament, Cape Town* [online] Available at: <http://www.andrewcusack.com/2009/die-parlementsgebou/> [Accessed 24 Jul. 2016].
- Da Costa, M and van Rensburg, R.** (2008) Space as ritual: rethinking spatial strategies in the African city. *South African Journal of Art History*, 23:3. Page 43–55.
- Dovey, K.** (1999). *Framing Places: Mediating power in built form*. London: Routledge.
- Fairclough, G., Harrison, R., Jameson, J. and Schofield, J. ed.,** (2008). *The Heritage Reader. 1st ed.* Abingdon: Routledge.
- Gentile, E.** (2005). Political religion: a concept and its critics – a critical survey. in *Totalitarian Movements and Political Religions*, 6(1), pp.19-32.
- Grobbelaar, L.** (2012). *New Royal Theatre*. MProf. University of Pretoria.
- Hillier B & Hansen, J.** (1989) *The social logic of space*. Cambridge: Cambridge University Press, pp.1-49.
- Holland, T.** (2013). *Rubicon: The Triumph and Tragedy of the Roman Republic 40th An. Edition.* (preface) London: Little Brown.
- Huyssen, A.** (2003) *Present Pasts: Urban Palimpsests and the Politics of Memory*. California: Stanford University Press
- Isakhan, B. & Stockwell, S.** (2011). *The secret history of democracy*. Houndmills: Palgrave Macmillan.
- Kingwell, M. and Turmel, P.** (2009). *Rites of way*. Waterloo, Ontario: Wilfrid Laurier University Press.

- King, T and Flynn, M.K.** (2012) Heritage and the post-apartheid city: Constitution Hill, Johannesburg in *International Journal of Heritage Studies*, 18:1, 65-82
- Kertzer, D.** 1988. *Ritual, Politics and Power*. New Haven and London: Yale University Press as cited in Ball (1994)
- Law-Viljoen, B. ed.** (2006). *Light on a Hill: Building the Constitutional Court of South Africa. 1st ed.* Johannesburg: David Krut.
- Macaulay, R.** (1966) *The Pleasure of Ruins*. 2nd Edition. New York: Walker & Company
- Muller, L. and Young, G.** (2005). *Heritage Audit: Union Buildings Estate*. Johannesburg: Newtown Landscape Architects.
- Rand, A.** (2007). *The Fountainhead*. (1994 ed.). London: Penguin.
- Rencken, C. ed.** (1989). *Union Buildings: The first 75 years*. 1st ed. Pretoria: Bureau of Information.
- SA Government** (1996). *The Constitution of the republic of South Africa 1996: The Bill of Rights. Government*, Chapter 2, Article 17, page 8.
- Schacter, D.** (1996). *Searching for Memory: The Brain, the mind and the past*. Harper Collins, pp.39-71.
- Riegl, A.** (1996). *The Modern Cult of Monuments - Its Essence and its Development*. In: **N. Stanley-Price, M. Talley and A. Melucco Vaccaro, ed.**, Historical and philosophical issues in the conservation of cultural heritage. 1st ed. Los Angeles: Getty Conservation Institute, pp.69-83.
- Rousseau, J. and Frankel, C.** (1947). *The social contract*. New York: Hafner Pub. Co.
- SABS** (2011) *The South African National Standards: The application of the national building regulations*. Pretoria: SABS Stabdards Division.
- Tshwane Planning Commissioners and City of Tshwane** (2013) *Tshwane 2055 Vision: Remaking South Africa's Capital City*. Tshwane: City of Tshwane.
- Watson, S. and Studdert, D.** (2006). *Markets as sites for social interaction: Spaces of diversity*. Bristol GB: The Policy Press.
- Young, I.** (1990) *Justice and the Politics of Difference*, Princeton, NJ: Princeton University Press. cited in **Watson, S. and Studdert, D.** (2006). *Markets as sites for social interaction: Spaces of diversity*. Bristol GB: The Policy Press.

11.3. Web

Autodesk (2015) *Lighting and Daylighting Design* [online] Available at: <http://sustainabilityworkshop.autodesk.com/buildings/lighting-and-daylighting-design>. Accessed 20 October 2016.

Betsky, A. (2015). *Times Square and the Reality of Public Spaces*. [online] Architect: Urbanism & Planning. Available at: http://www.architectmagazine.com/design/times-square-and-the-reality-of-public-spaces_o. Accessed 25 Jul. 2016.

Betsky, A. (2015). *Beyond Buildings: The Architecture of Liminal Spaces*. [online] Architect: Urbanism & Planning. Available at: http://www.architectmagazine.com/design/urbanism-planning/the-architecture-of-liminal-spaces_o. Accessed 25 Jul. 2016.

Brecht, C. (n.d.) *Peter Fechter*. [online] Available at: <http://www.berliner-mauer-gedenkstaette.de/en/1962-300,353,2.html>. Accessed 10 October 2016.

Constitutional Court of South Africa (2013) *Visitor's Brochure* [online pdf] Available at: <http://www.constitutionalcourt.org.za/site/thecourt/concourtbrochure-2013.pdf>. Accessed July 2016.

BusinessTech.co.za (2016). *How much it will cost to make Pretoria the only capital city in South Africa*. [online] Available at: <http://businesstech.co.za/news/government/112601/how-much-it-will-cost-to-make-pretoria-the-only-capital-city-in-south-africa/>. Accessed 19 Feb. 2016.

Johnston, L. (2016) *Public Ablutions* [online] Available at: <http://www.ozetecture.org/2012/public-ablutions/#!prettyPhoto>. Accessed 20 October 2016.

Kamaldien, Y. (2016) *Cape poet urges universities to teach his work (Interview with James Matthews)*. [online] Available at: <http://www.iol.co.za/news/south-africa/western-cape/cape-poet-urges-universities-to-teach-his-work-2001889>. Accessed 29 March 2016.

La Shure, C. (n.d.) *What is Liminality?* [online] Available at: <http://www.liminality.org/about/whatisliminality/>. Accessed 27 September 2016.

Harvey, D. (2008). *The Right to the City*. New Left Review, [online] (53). Available at: http://newleftreview.org/II/53/david-harvey-the-right-to-the-city#_edn8. Accessed 8 April 2015.

Gustafson Porter (n.d.) *Diana, Princess of Wales Memorial*. [online] Available at: <http://www.gustafson-porter.com/diana-princess-of-wales-memorial-fountain/>. Accessed 10 October 2016.

GBCSA (2008) *The Inside Guide to Green Star S.A.* [online pdf] Available at: <https://www.gbcsa.org.za/wp-content/uploads/2013/05/FACT-SHEET-Green-Star-SA-Oct-2008.pdf>. Accessed 19 October 2016.

History.com (n.d.) *Ancient Greek democracy*. [online] Available at: <http://www.history.com/topics/ancient-history/ancient-greece-democracy>. Accessed 8 April 2016.

Nelson, J. (n.d.) *Facebook Status* [online] Available at: <https://www.facebook.com/TheNowist>. Accessed 20 September 2016.

News24 (2014) *Mandela bust unveiled at Parliament* [online] Available at: <http://www.news24.com/elections/news/mandela-bust-unveiled-at-parliament-20140428> accessed 27 September 2016.

Page, M. (2008). *Dispatch - Urban Design and Civil Protest. Places Journal*, [online] 20(1), pp.84-87. Available at: <https://placesjournal.org/assets/legacy/pdfs/urban-design-and-civil-protest.pdf>. Accessed 1 Mar. 2016.

Parliament of the Republic of South Africa (n.d.) *Parliament: Public Participation*. [online] Available at: http://www.parliament.gov.za/live/content.php?Item_ID=28. Accessed 20 April 2016.

PPS.org (n.d.). *Streets as Places - Project for Public Spaces*. [online] Project for Public Spaces. Available at: <http://www.pps.org/reference/streets-as-places/>. Accessed 26 Sep. 2016.

PPS.org (n.d.) *Signature Places: Great Parks we can Learn From*. Available at: <http://www.pps.org/reference/six-parks-we-can-all-learn-from/>. Accessed: 9 October 2016.

SA History (2011) *Pretoria timeline 1800-2009*. [online] Available at: <http://www.sahistory.org.za/topic/pretoria-timeline-1800-2009>. Accessed 20 February 2016.

SA History (2013) *Prehistory of Pretoria*. [online] Available at: <http://www.sahistory.org.za/topic/prehistory-pretoria>. Accessed 20 February 2016.

Savastio, R. (2013) *Icelanders Overthrow Government and Rewrite Constitution After Banking Fraud-No Word From US Media* [online] Available at: <http://guardianlv.com/2013/12/icelanders-outhrow-government-and-rewrite-constitution-after-banking-fraud-no-word-from-us-media/>. Accessed 20 March 2016.

Schutte, C. (2016). *The Birth of the Union Buildings* [online] Theheritageportal.co.za. Available at: <http://www.theheritageportal.co.za/article/birth-union-buildings>. Accessed 6 April 2016.

South African Government (2016) *Water and Sanitation embarks on a Water Saving Campaign in Bushbuckridge* [online] Available at: <http://www.gov.za/speeches/water-and-sanitation-embarks-water-saving-campaign-bushbuckridge-6-oct-2016-0000>. Accessed 19 October 2016.

Shakur, T. (1994) *Tupac Shakur: In his own words MTV* [online video clip] Available at: <https://www.youtube.com/watch?v=D1TQU1gsTcVY>. Accessed 23 August 2016.

The Commonwealth (n.d.) *Botswana: Consitution and Politics* [online] Available at: <http://thecommonwealth.org/our-member-countries/botswana/constitution-politics>. Accessed 8 April 2016.

Trigg, D. (2010) *Architecture and Nostalgia in the Age of Ruin*. [lecture transcript, online] Available at: https://www.academia.edu/208447/Architecture_and_Nostalgia_in_the_Age_of_Ruin. Accessed 8 August 2016.

Tshiqi, B. (2015) *Why protesters often have no other choice but to burn public property*. [online] Available at: <http://www.timeslive.co.za/local/2015/05/08/why-protesters-often-have-no-other-choice-but-to-burn-public-property1>. Accessed 23 August 2015.

UN (1948) *Universal Declaration of Human Rights* [online pdf] Paris: United Nations. Available at: <http://www.un.org/en/universal-declaration-human-rights/>. Accessed 11 February 2016.

UN (n.d.) *The human right to water and sanitation* [online] Available at: http://www.un.org/waterforlifedecade/human_right_to_water.shtml. Accessed 19 October 2016.

Van Eyck, A. (1968) *Doorstep*. In team 10 primer, ed. **Alison Smithson**. London: Studio Vista: 96-104. As cited in n.a. (n.d.) Liminal Theory and Principles [online] Available at: http://arch.ttu.edu/wiki/Liminal_Theory_and_Principles. Accessed 27 September 2016.

Whyte, W. (1988). *The Social Life of Small Urban Spaces*. [video] Available at: <https://www.youtube.com/watch?v=MjxXTsHgc8g>. Accessed 21 May 2016.

Wikipedia (2016). *Gettysburg Address*. [online] Available at: https://en.wikipedia.org/wiki/Gettysburg_Address#cite_ref-Borrit_18-0. Accessed 25 May 2016.

Woods, L. (2012). *Beyond Memory*. [Blog] Lebbeus Woods. Available at: <https://lebbeuswoods.wordpress.com/2012/03/22/beyond-memory/>. Accessed 4 October 2016.

11.4. Images & Video

AKE, D.J. (2013) *A visitor at the Vietnam Veterans Memorial in Washington passes early in the morning on Veterans Day, Nov. 11, 2013, to look at the names inscribed on the wall.* [online image] Available at: <http://abcnews.go.com/Politics/heartbreak-hope-quest-add-74-names-vietnam-memorial/story?id=23276750>. Accessed 10 October 2016.

Alexander, K. (1991) *Black Eagle* [painting] in Robbins, D. (2000) *Keith Alexander: The Artist in Retrospect*. Jonathan Ball Publishers: Johannesburg, p109.

Baker, H. (1909) *Preliminary water-colour sketch for the Union Buildings, dated 25th June 1909.* in B (1996). Herbert Baker, the Union Buildings and the Politics of Architectural Patronage. *SAJAAH*, 6(1-4), pp.1-9.

BBC (2016) *Students forced their way into the parliamentary complex.* [online image] Available at: <http://www.bbc.com/news/world-africa-34592523>. Accessed 27 September 2016.

Beier, C. (2010) *Berlin wall Memorial in the Bernauer Strasse, Berlin, Germany.* [online image] Available at: <http://www.cbpictures.com/media/c501873c-b403-11df-bc04-00270e1b481a-berlin-wall-memorial-in-the-bernauer-strasse-berlin-germany>. Accessed 16 October 2016.

Bennet, L. (2015) *Minister of Higher Education Blade Nzimande addresses students who are protesting outside of parliament on October 21, 2015 in Cape Town, South Africa.* [online image] Available at: <http://www.timeslive.co.za/politics/2015/10/22/Students-held-Blade-Nzimandes-staff-hostage>. Accessed 27 September 2016.

Bothma, N. (2016) *A general view of the National Assembly in parliament in Cape Town.* [online image] Available at: <http://www.dispatchlive.co.za/news/2016/04/05/anc-seen-saving-zuma-in-impeachment-vote/>. Accessed 27 September 2016.

Buchanan, A. (2010) *The Olympic Sculpture Park.* [online image] Available at: <http://www.landezine.com/index.php/2011/12/seattle-landscape-architecture/>. Accessed 16 October 2016.

CNN (2013). *Children waved South African flags at the Milton Mbekela school in the village of Qunu, Mr Mandela's boyhood home.* [online image] Available at: <http://www.african-sweetheart.com/2013/07/happy-95th-birthday-to-former-south.html>. Accessed 24 July 2016.

Cusack, A. (2009) *Henry Freeman's original design for the Parliament Building.* [online image] Available at: <http://www.andrewcusack.com/2009/die-parlementsgebou/>. Accessed 24 July 2016

Datter, T. (2009) *Coyote fountain in the Jardin del Centenario in the center of the borough of Coyoacan in Mexico City.* [online image] Available at: <https://commons.wikimedia.org/wiki/File:CoyoteFountainCentenarioDF.JPG>. Accessed 9 October 2016.

Dept. Public Works (1910) *Union Buildings Estate Site Plan.* In: Muller, L. and Young, G. (2016). Heritage Audit: Union Buildings Estate. Johannesburg: Newtown Landscape Architects.

De Wall, J. & Przywecki, W. (2016) *Photos of Richard Lepastrier's Public Ablutions* [online images] Available at: <http://www.ozetecture.org/2012/public-ablutions/#!prettyPhoto>. Accessed 20 October 2016.

Ernst de Jong Studios (1966) *Photograph of Church Square and the Transvaal Provincial Administration building by night*, used as back cover of brochure: Transvaal Provincial Administration inauguration of the Provincial Building by the State President, Mr C.R. Swart November 27, 1963 [historical brochure]. Pretoria: South African Government.

Grey, C.G.P. (2005) *Diana, Princess of Wales Memorial Fountain* [online image] Available at: https://en.wikipedia.org/wiki/File:Diana,_Princess_of_Wales_Memorial_Fountain.JPG. Accessed 10 October 2016.

Ives, S. (2015) *Monday's Monument: Peter Fechter Memorial Obelisk, Berlin*. [online image] Available at: <http://www.sanantoniopeace.center/mondays-monument-peter-fechter-memorial-obelisk-berlin/>. Accessed 10 October 2016.

Johnston, R.K. (2012) *Marking the location of the Berlin Wall*. [online image] Available at: <https://rkeithjohnson.wordpress.com/2013/02/10/germany-2012-5/>. Accessed 10 October 2016.

Livemag (2015) *#FeesMustFall: The historic week in pictures* [online image] available at: <http://livemag.co.za/vip/feesmustfall-week-in-pictures/> Accessed 29 September 2016.

Maduna, L. (2016) *A scuffle between Economic Freedom Fighters MPs and Parliamentary Protection Services during President Jacob Zuma's 'Question and Answer' session in Parliament on May 17, 2016 in Cape Town*. [online image] Available at: <https://www.enca.com/south-africa/no-more-overalls-in-parliament>. Accessed 27 September 2016.

Mock, F.L. (1994) *Maya Lin: Strong Clear Vision*. [film] USA: Freida Lee Mock.

N.A. (1911) *Union Buildings Estate Site Plan*. in: **Muller, L. and Young, G.** (2005). *Heritage Audit: Union Buildings Estate*. Johannesburg: Newtown Landscape Architects.

N.A. (2010) *Berlin Wall* [online image] Available at: <https://obscurelight.wordpress.com/>. Accessed 10 October 2016.

N.A. (2010) *Mexico city coyoacan around plaza bidalgo and centennial gardens*. [online image] Available at: <https://georgeinmexico.wordpress.com/2010/07/11/frida-diego-bullfighters-mummies-and-more-georges-guide-to-mexico-city-%E2%80%93-south-of-the-center/>. Accessed 9 October 2016.

N.A. (2016). *The final Parliament building as constructed (without statues, dome or fountains)*. [online image] Available at: https://en.wikipedia.org/wiki/Houses_of_Parliament,_Cape_Town#/media/File:Parliament_of_the_Cape_of_Good_Hope_-_CapeArch.jpg. Accessed 27 September 2016.

N.A. (2016) *Winter Sculpture Fair returns to the Nirox Foundation Sculpture Park*. [online image] Available at: <http://www.mediaupdate.co.za/media/104768/winter-sculpture-fair-returns-to-the-nirox-foundation-sculpture-park>. Accessed 16 October 2016.

N.A. (n.d.) *Diana Memorial Fountain* [online image] Available at: <https://www.royalparks.org.uk/parks/hyde-park/things-to-see-and-do/memorials,-fountains-and-statues/diana-memorial-fountain>. Accessed 10 October 2016.

National Park Service (n.d.) *Vietnam Veteran's Memorial*. [online image] Available at: <http://www.historybyzim.com/2012/06/maya-lin-the-vietnam-veterans-memorial/>. Accessed 10 October 2016.

Price, G. for **eThekweni Municipality** (2009). *Greening Durban: Water Conservation Guideline*. Durban: eThekweni Municipality. Available at: http://www.durban.gov.za/City_Services/development_planning_management/environmental_planning_climate_protection/Publications/Documents/GG_Water_Guide.pdf Accessed 14 Sep. 2016.

Primi Piatti (2015) *Redbull Xfighters eventspace*. [online image] <http://www.primi-world.co.za/primi-food-stall-at-red-bull-x-fighters/>

SABC (2015). *Police fire stun grenades at protesting students*. [online image] Available at: <http://www.sabc.co.za/wps/wcm/connect/af856f004a50904c9fdedf6d39fe9e0c/Stun-Grenades-Fees-Must-Fall.jpg?MOD=AJPERES&CACHEID=af856f004a50904c9fdedf6d39fe9e0c>. Accessed 26 September 2016.

SABC (2015). *Students throwing rocks at police*. [online image] Available at: <http://www.sabc.co.za/news/a/06d982004a5172109061db6d39fe9e0c/Students-divided-over-Fees-must-fall-outcome-20151024> Accessed 26 September 2016.

Sowetan (2015) *Students from several universities protested at the Union Buildings in Pretoria last year*. [online image] Available at: <http://www.bdlive.co.za/opinion/2016/02/29/history-could-douse-campus-infernos>. Accessed 29 September 2016.

Thurn, J.F. (1995) *Berlin, East Side Gallery*. [online image] available at: https://en.wikipedia.org/wiki/File:Bundesarchiv_B_145_Bild-F088809-0038,_Berlin,_East_Side_Gallery.jpg. Accessed: 10 October 2016

Zhao, S. (2010) *National Council of Provinces interior* [online image] Available at: https://en.wikipedia.org/wiki/National_Council_of_Provinces#/media/File:National_Council_of_Provinces_of_South_Africa.jpg. Accessed 27 September 2016.

Zhang, H. (2016) *The Hillside Eco Park* [online image] Available at: <http://www.landezine.com/index.php/2016/09/the-hillside-eco-park-by-zt-studio/>. Accessed 16 October 2016.



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ADDENDUM