field

public space infrastructure

Mentors: D. de Bruyn & H. Reynders
Submitted as part of the requirements for the
MArch(Prof)
Annemie van den Heever 21040975
2006
Contents

1. Introduction
   1.1 Manipulation of space 10
   1.2 Sluices and streams: movement through space 14

2. Theoretical discourse
   2.1 Manipulation of space 10
   2.2 Sluices and streams: movement through space 14

3. Context
   3.1 Context analysis 20
     3.2 The city and Salvokop 32
     3.3 Railway tracks 35
     3.4 Bosman Station and Dairy Mall Taxi Rank 36
     3.5 Pretoria Station 37
     3.6 Bosman Station Bridge 38
     3.7 Pretoria Station Bridge 39
     3.8 Potgieter Road 41
     3.9 Historical context 42
     3.10 Freedom Park 46
     3.10.1 Residential activity group 48
     3.10.2 Criminality activity group 52
     3.10.3 Institutional activity group 53
     3.10.4 Tourism activity group 54
     3.10.5 Building conversion activity group 55

4. Precedent studies
   4.1 Precedent study 1: Forum 2004, Barcelona, Spain 56
   4.2 Precedent study 2: Heys Memorial Hall parking, Sunnyside, Pretoria 60
   4.3 Precedent study 3: Central Station, Rotterdam 62

5. Design development
   5.1 Your surroundings positioned: organisation of space 64
      5.1.1 Scenarios 64
         5.1.1.1 Something old, something new: urban terrain 66
         5.1.1.2 Something borrowed: sculpture park / art research 67
         5.1.1.3 Something dark and dirty 68
   5.1.2 Programming a street edge 69
   5.1.3 De-programming a core 71
   5.2 Your position surrounded: atmosphere 78
      5.2.1 Model 1: invisible infrastructure 80
      5.2.2 Model 2: polite urbanism 82
      5.2.3 Model 3: landscape as text 84
      5.2.4 Model 4: presence and absence 86
      5.2.5 Model 5: Mnemonic field 90

6. Conclusion

7. Technical investigation
   7.1 Structure 126
   7.2 Surfaces 126
   7.3 Lighting 126
   7.4 Stainless steel wire mesh ceiling 131
   7.5 Soil contamination 132
   7.6 Building cooling 133
      7.6.1 Natural ventilation 133
      7.6.2 Thermal mass 133
      7.6.3 Earth and geothermal conditioning 133
      7.6.4 Labyrinth 134
      7.6.5 Displacement ventilation (UAD) 134
      7.6.6 Chilled structure 134

8. Addendum 1: Accommodation schedule 158

9. Addendum 2: Baseline document 162

10. Sources 164
List of figures

Fig. 1 Heys Memorial Hall parking (Author 2006) 9
Fig. 2 Magnolia Dal, vietnamese festival (Author 2006) 9
Fig. 3 Magnolia Dal, vietnamese festival (Author 2006) 9
Fig. 4 House - Rachel Whiteread, 1993, concrete (Kimtrzakaki 2004:118) 11
Fig. 5 Matter of Time - Richard Serra, 2005, 43cm high 6cm thick sandblasted steel sheets, Guggenheim, Bilbao (McGuirk 2005:86). 12
Fig. 6 The Broken Column - François Nicolas Henri Racine de Monville, (1774-1789), photographer Michael Kenna (1988) (Ketcham 1994:76) 13
Fig. 7 Restoration architect, Olivier Choppin de Janvry, co-owner of Désert de Retz, in front of the unrestored Temple of Pan, 1993 (Ketcham 1997:90) 13
Fig. 8 Tartar Tent, Isle of Happiness, construction 1774-1789, restored 1972-1993 (Ketcham 1997:84) 13
Fig. 9 Graffiti - Paint Drip Risks, Cape Town (Spot 2006:14) 13
Fig. 10 Carte générale du desert - Georges Le Rouge, 1785, engraved map (Ketcham 1994:1) 15
Fig. 11 The naked city - Guy Debord, 1958 (Ford 2005:35) 15
Fig. 12 Lava Floor - Olafur Eliasson, 2002, www.olafureliasson.net 16
Fig. 13 Isamu Noguchi, playground planned for Riverside Drive Park, New York (with Louis Kahn), 1964, plaster model (Hunter 1979:59) 16
Fig. 14 Asphalt Spot - R&Sic... , 2003, Tokamashi, Japan. (Ruby 2006:121) 17
Fig. 15 Asphalt Spot - R&Sic..., 2003, Tokamashi, Japan. (Ruby 2006:121) 17
Fig. 16 Contoured Playground (planned for Central Park, New York) - Isamu Noguchi, 1940, plaster (Hunter 1979:57) 17
Fig. 17 Plains - William Lamson, 2004, Kansas (Lanson 2005:42) 19
Fig. 18 Cloud Gate - Anish Kapoor, 2005, www.gallagher.com 19
Fig. 19 Salvokop - Marshalling yard in summer, looking north towards the city. Chief Engineer in the front and Department of Home Affairs on the right. (Author 2006) 21
Fig. 20 Salvokop - Marshalling yard in winter. Looking north-east towards Pretoria Station designed by Herbert Baker. (Author 2006) 22
Fig. 21 Salvokop - Marshalling yard in winter. Looking south towards the neighbourhood. (Author 2006) 23
Fig. 22 Pretoria in the greater context (Author 2006) 24
Fig. 23 Physical context of Salvokop (Author 2006) 26
Fig. 24 Context analysis (Author 2006) 28
Fig. 25 Context analysis (Author 2006) 30
Fig. 26 Relationship between Salvokop and Pretoria centre (Author 2006) 32
Fig. 27 Railway tracks north of Salvokop (Author 2006) 34
Fig. 28 Bosman Station and Pretoria Station (Author 2006) 36
Fig. 29 Bridges crossing the railway tracks (Author 2006) 38
Fig. 30 Relationship between Salvokop and Potgieter Road (Author 2006) 40
Fig. 31 Historical context of the marshalling yard of Salvokop (Author 2006) 42
Fig. 32 Pretoria - Surveyor General 1932 update of 1911 survey (Von der Waal Collection, Merensky Library, University of Pretoria) 44
Fig. 33 Pretoria (Pretoriana Collection, Merensky Library, University of Pretoria) 44
Fig. 34 Central Workshop interior in circa 1896 (Pretoriana Collection, Merensky Library, University of Pretoria) 45
Fig. 35 Scenario of Freedom Park and its surroundings, from Freedom Park: National Legacy Project (2002), prepared by Freedom Park Architects in Association 46
Fig. 36 Urban proposal for Salvokop 47
Fig. 37 Traces of the marshalling yard (Author 2006) 48
Fig. 38 Roundhouse (at Waterval-Onder) interior, circa 1895 (Pretoriana Collection, Merensky Library, University of Pretoria) 49
Fig. 39 Railway tracks of the marshalling yard (Author 2006) 49
Fig. 40 Workshop in marshalling yard (Pretoriana Collection, Merensky Library, University of Pretoria) 49
Fig. 41 Workshops 1895 (Pretoriana Collection, Merensky Library, University of Pretoria) 49
Fig. 42 Activity group: Residential (Author 2006) 51
Fig. 43 Activity group: Criminality (Author 2006) 52
Fig. 44 Activity group: Institutional (Author 2006) 53
Fig. 45 Activity group: Tourism (Author 2006) 54
Fig. 46 Activity group: Building conversion (Author 2006) 55
Fig. 47 Forum 2004, Barcelona, Spain (Futagawa 2005:33) 56
Fig. 48 Forum 2004, Barcelona, Spain (Hervog & de Meuron 2005:33) 58
Fig. 49 Forum 2004, Barcelona, Spain (Hervog & de Meuron 2005:33) 58
Fig. 50 Forum 2004, Barcelona, Spain (Author 2003) 59
Fig. 51 Forum 2004, Barcelona, Spain (Author 2003) 59
Fig. 52 Forum 2004, Barcelona, Spain 59
Fig. 53 Forum 2004, Barcelona, Spain 59
Fig. 54 Forum 2004, Barcelona, Spain 59
Fig. 55 Heys Memorial Hall (Author 2006) 60
Fig. 56 Heys Memorial Hall and its parking during the week (Author 2006) 60
Fig. 57 Aerial of part of Sunnyide (public swimming pool not yet built) (Author 2006) 61
Fig. 58 Parking next to Heys Memorial Hall on the weekend (Author 2006) 61
Fig. 59 Play park on the corner of Kotze and Bourke Street on the weekend 61
Fig. 60 Parking next to Heys Memorial Hall on the weekend (Author 2006) 61
Fig. 61 Central Station, Rotterdam. Terrariaum and underground station concourse (Atelier Quadrat 2002:64) 63
Fig. 62 Central Station, Rotterdam. Flamingo pool with terrarium and aquarium at rear (Atelier Quadrat 2002:63) 63
Fig. 63 Central Station, Rotterdam. Future scenario: redevelopment of station area after extending railway tunnel as a linking structure (Atelier Quadrat 2002:61) 63
Fig. 64 Central Station, Rotterdam. Section including metro shuttle to Blijdorp (Atelier Quadrat 2002:63) 63
Fig. 65 Urban terrain scenario (Author 2006) 66
Fig. 66 Square in Kobe, Japan, 2005, Barbara Agnoletto & Laura Mascino - night time (Capezzuto & Grima 2006:52) 66
Fig. 67 Square in Kobe, Japan, 2005, Barbara Agnoletto & Laura Mascino (Capezzuto & Grima 2006:51) 66