Marco Macagnano
Mentor: Professor Karel A. Bakker

A Centre for the Performing Arts
  catalyst for urban regeneration

Submitted in fulfillment of the requirements for the degree of Magister in Architecture (Professional) in the Faculty of Engineering, the Built Environment and Information Technology.

Department of Architecture,
The University of Pretoria
November 2005
List of Figures

1.01 Traditional Performers: Drummers (www.lclark.edu)
1.02 Traditional Dancers (members.tripod.com)
1.03 Local Performance (www.sa.armstrong.edu)
1.04 Traditional Dancers (www.der.org)
1.05 Traditional Dancers (www.traveloutward.com)
1.06 Ballroom Dancers (www.nwad.org.uk)
1.07 Aerial photograph of Salvokop
1.08 Local Artist (Khadja Nin) overlay onto photo of Salvokop, picture-montage by author
1.09 Department of Arts and Culture Banner (www.dac.gov.za)
1.10 MIINIO Banner
1.11 National Arts Council Logo

Precedent Studies

2.01 BBC Music Box - Foreign Office Architects 3D Visualisation (www.arcspace.com)
2.02 BBC Music Box - Foreign Office Architects 3D Visualisation (www.arcspace.com)
2.03 BBC Music Box - Foreign Office Architects 3D Visualisation (www.arcspace.com)
2.04 BBC Music Box - Foreign Office Architects 3D Visualisation (www.arcspace.com)
2.05 BBC Music Box - Foreign Office Architects 3D Visualisation (www.arcspace.com)
2.06 Holland Performing Arts Centre (www.ohomahaperformingarts.com)
2.07 Holland Performing Arts Centre (www.ohomahaperformingarts.com)
2.08 Holland Performing Arts Centre (www.ohomahaperformingarts.com)
2.09 Holland Performing Arts Centre (www.ohomahaperformingarts.com)
2.10 Holland Performing Arts Centre (www.ohomahaperformingarts.com)
2.11 State Theatre interior photograph (www.statetheatre.co.za)
2.12 State Theatre interior photograph (www.statetheatre.co.za)
2.13 State Theatre exterior photograph, by author
2.14 State Theatre exterior photograph, by author
2.15 Musiktheater (www.aufschalte2006.de)
2.16 Musiktheater (www.herner-netz.de)
2.17 Musiktheater (www.gelsenkirchen.de)
2.18 Musiktheater (www.bda-gelsenkirchen.de)
2.19 Musiktheater (stadt.gelsenkirchen.de)
2.20 Nagaoka Site Plan (www.ohomahaperformingarts.com)
2.21 Nagaoka Ground Floor Plan (www.c-channel.com/personal/work)
2.22 Nagaoka Lyric Hall (www.c-channel.com/personal/work)
2.23 Nagaoka Lyric Hall (www.c-channel.com/personal/work)
2.24 Nagaoka Lyric Hall (www.c-channel.com/personal/work)

Contextual Analysis

3.01 Regional layout and connectivity of Pretoria Inner City, adapted and modified from Salvokop Development Framework by author
3.02 Aerial View over Salvokop (Freedom Park Competition Briefing Document, 2003)
3.03 Cultural Spine link between Salvokop and Inner City, by author
3.04 Residential concentrations and walking distances, adapted and modified from Salvokop Development Framework by author
3.05 Aerial Photograph over Salvokop (Freedom Park Competition Briefing Document, 2003)
3.06 Proposed layout for Salvokop (Salvokop Development Framework, 2003)
3.07 Current land use of Salvokop (Salvokop Development Framework, 2003)
3.08 Salvokop Form Response Drawing (Salvokop Development Framework, 2003)
3.09 Public transport systems, by author
3.10 Public movement patterns, by author
3.14 Photograph of Freedom Park access, by author
3.15 – 3.17 3D visualizations of Freedom Park Development
3.18 Regional Path of Gautrain
3.19 Gautrain impact sections (Salvokop Development Framework, 2003)
3.20 Historical footprint of Salvokop (Salvokop Development Framework, 2003)
3.21 NZASM heritage housing complex, photo by author
3.22 NZASM plaque, photo by author
3.23 – 3.25 NZASM Heritage Housing, photo by author
3.26 Economic structure of City (South African Census 2001)
3.27 Economically active population (South African Census, 2001)
3.28 Average population for Gauteng (South African Census, 2001)
3.29 Persons not attending educational institutions (South African Census, 2001)
3.30 Population density for Gauteng (South African Census, 2001)
3.31 Population with no previous schooling (South African Census, 2001)
3.32 Population percentage with disabilities (South African Census, 2001)
3.33 Cultural Spine through city, by author
3.34 Inner city vision (Salvokop Development Framework, 2003)
3.35 Development strategy for Salvokop (Salvokop Development Framework, 2003)
3.36 Aerial view of site and context, (Freedom Park Competition Briefing Document, 2003)
3.37 Section through site, by author
3.38 Proposed cadastral layout (Salvokop Development Framework, 2003)
3.39 Form response drawing and prominent axes by author (adapted from Salvokop Development Framework, 2003)
3.40 – 3.43 Photographs of site by author
3.44 View to north, photograph by author
3.45 Western border, photograph by author
3.46 View to south, photograph by author
3.47 View towards NZASM Housing, photograph by author
3.48 Pedestrian bridge from station, photograph by author
3.49 View towards site form north, photograph by author
3.50 Location of Public Open Space, photograph by author
3.51 External access to Freedom Park
3.52 Vision of position of Gautrain station
3.53 Section through Ceremonial Way, by author (adapted from Salvokop Development Framework)

Design Discourse

5.01 Music sheet - chinese folk song
5.02 Site plan of Centre for the Performing Arts
5.03 Section through Jesse James Hall, Texas (Schouvarft, 1973: 64)
5.04 Concept Sketch of Principal Performance Space
5.05 Interior view of Principal Performance Space
5.06 – 5.08 Variation of the Multiform Stage
5.09 Exterior isometric of final building form
5.10 – 5.12 Concept sketch, Secondary Performance Space
5.13 Exterior isometric view of final building form
5.14 Concept sketch - section through Secondary Performance Space
5.15 Concept sketch - plan through Secondary Performance Space
5.16 – 5.21 Studio theatre variable internal layouts
5.22 Concept sketch of Events Gallery - oblique section
5.23 Concept section through Principal Performance Space - retention of sightlines
5.24 Perspective view of Centre for the Performing Arts
5.25 Concept plan of ancillary spaces
5.26 Isometric view of ancillary spaces from above
5.27 Spatial arrangement and linkages
5.28 Exterior isometric of final building form
5.29 Perspective view of primary entrance
5.30 Concept section through Ceremonial Way - height to width ratio and human scale
5.31 Explode view of Centre for the Performing Arts by levels
5.32 Movement systems diagram
5.33 Perspective view of main approach
5.35 Concept sketch of relationship with public open space
5.36 Revised spatial development framework for Salvokop, by author
5.37 Exterior isometric view of final building form
5.38 View of Centre from vantage point of NZASM Heritage Housing Complex
5.39 View of Centre from vantage point of NZASM Heritage Housing Complex
5.40 View of Centre from vantage point of NZASM Heritage Housing Complex

Technical Investigation

6.01 3D View of air conditioning paths through building
6.02 – 6.03 Views of air conditioning paths through building
6.04 – 6.05 Impact of sun during the year and effectiveness of shading devices
6.06 – 6.11 Effects of solar incidence during summer months
6.12 – 6.15 Effects of solar incidence during winter months
6.16 Perspective view of internal column support structure for curtain wall
6.17 External perspex detail of curved curtain wall feature
6.18 External louvre shading devices
6.19 Example of roof treatment: application of bitumen to roof surface
6.20 Example of roof treatment: application of modified bitumen cap sheet, torched on
6.21 Section through Principal Performance Space
6.22 Noise control treatment, sections