

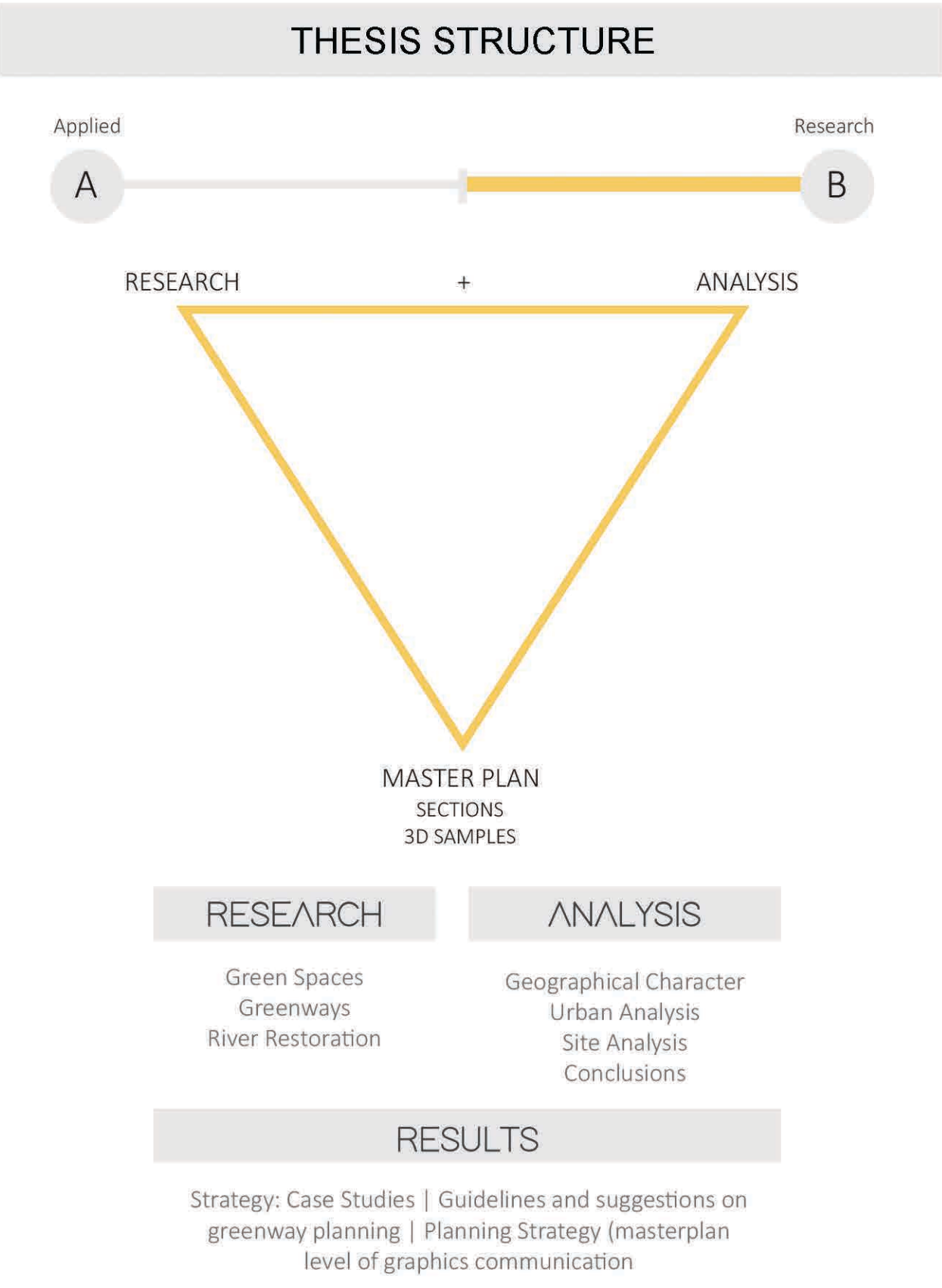
# ANHANDUI LINEAR PARK A GREENWAY PROPOSAL FOR THE CITY OF CAMPO GRANDE

This thesis is an investigation of greenways and river restoration definitions, methodology, strategies, outcomes and potentials focusing on how it benefits life in an urban environment, not only for humans but the environment as well. This study aims to present the importance of ecological restoration and preservation in urban landscapes, including an exemplified proposal for the waterfront of the Anhandui river, the biggest watercourse crossing Campo Grande, a city located in Midwest Brazil.

Through professional literature analysis and a systematic field assessment, this thesis seeks to address five main issues while planning a greenway in Campo Grande: erosion and landslide, flood control, lack of connections (ecological, visual and functional), ecological degradation and loss of identity. A thorough site analysis has been conducted to deepen the understanding of the area, thus its conflicts and potentials. Utilizing the existing knowledge on greenways and river restoration processes, satellite imagery, online research, interdisciplinary approach and landscape methods and tools, guidelines and strategies were presented on an exemplified proposal created to renovate the waterfront of the Anhandui river. The research focused on understanding the emerging concept of greenways, how it benefits the urban landscape and how these could be applied in Campo Grande.

As a result, this thesis utilizes greenway strategies with a river restoration approach to promote urban health while conserving natural values, restoring habitats in an active way, enhancing accessibility, improving/restoring degraded riparian zones, introducing new functions and creating a linear park well integrated in the city structure. These results are presented in six masterplan maps elaborated to show the proposed traffic structure, pedestrian pathway, cycling route, new green spaces, functions and the ecological approach. The overall proposed atmosphere of the site can be seen on a couple of sample hand drawn sketches and sections.

After this study was concluded, it is viable to say that by introducing these concepts and guidelines to the landscape scenario of Campo Grande, it broadened the horizons of urban planning for the city, making it possible for these guidelines and principles to be integrated in the city's masterplan and land use laws and regulations. Moreover, there is the potential for further research on the site, by analysing deeper the environmental aspects of the area with an interdisciplinary approach in order to come to a more detailed design proposal for the whole site, that later could be used as a reference to be applied in the planning and restoration of the other watercourses in the city.



GREEN SPACES AND GREENWAYS

Ownership: Public | Private - Functionality: For production | For protection | For regeneration - Structure: Compact | Linear elements

Two photographs showing urban green spaces. The left image shows a busy street intersection in Campo Grande, Brazil, with a large green space in the foreground. The right image shows a park area with a large fountain and greenery.

Campo Grande, Ary Coelho square (2008, Retrieved from <http://www.diariodigital.com.br/policia/homem-encontrado-morto-em-praca/174294/>)

Campo Grande, Afonso Pena Avenue (n.d., Retrieved from <https://www.pinterest.co.uk/pin/542683823823050597/?p=true>)

GREENWAYS are a type of green space defined as a linear element and that can be found not only in urban landscapes but in rural zones as well, and it is believed that the term started in the United States of America, spreading internationally afterwards (Ahern, 2012). Some benefits in urban landscapes:

Four icons representing benefits of greenways: a thermometer with a downward arrow (cooling), a wind turbine (wind energy), a water drop (water conservation), and a person walking (recreation).

CITY LOCATION

A map showing the location of Campo Grande in Brazil.

SITE LOCATION

A map showing the location of the study area in Campo Grande.

RIVER FUNCTIONS

THEN

Icons representing river functions in the past: a person fishing, a person walking, and a person sitting on a bench.

NOW

Icons representing river functions in the present: a person walking, a person sitting on a bench, and a person fishing.

GOALS AND SITE ANALYSIS APPROACH

A diagram showing the goals and site analysis approach. It includes icons for 'SHORE RECONSTRUCTION (EROSION AND LANDSLIDE)', 'WATER STRATEGIES (FLOODS, WATER SPEED AND QUALITY)', 'CONNECTIONS (FUNCTIONAL, VISUAL, ECOLOGICAL)', 'ECOLOGICAL RESTORATION', 'ENHANCE RIVER IDENTITY', and 'CREATE A CONTINUOUS RIVER GREENWAY AND LINEAR PARK'. Below these icons, the text 'ANALYSIS' is written in large letters, with each letter corresponding to a specific goal or approach.

CONCLUSIONS

A map showing the conclusions of the study. It includes icons for 'OPPORTUNITIES', 'THREATS', 'CHALLENGES', and 'SOLUTIONS'. The map shows the location of the study area and the proposed greenway.

STRATEGY

A diagram showing the strategy for the greenway. It includes icons for 'ECONOMY', 'ENVIRONMENT', 'SOCIAL', and 'CULTURE'. The central text is 'CONTINUOUS RIVER GREENWAY AND LINEAR PARK'.

PROPOSED ATMOSPHERES

Four photographs showing different proposed atmospheres for the greenway. The images show a river with a bridge, a river with a walkway, a river with a park, and a river with a walkway and park.

FUNCTION MAP

A map showing the function map of the greenway. It includes icons for 'LAND USE', 'TRAFFIC AND CONNECTIONS', 'VISUAL CONNECTIONS', 'RIVER CHARACTER', 'PROBLEMS AND ISSUES', 'VALUES', 'PLANT APPLICATION', and 'PARTS 1, 2, 3, 4'.

GREENWAY MOBILITY MASTER PLAN

ECOLOGICAL RESTORATION

A diagram showing the ecological restoration plan. It includes icons for 'MOBILITY', 'BIODIVERSITY', 'LIFE', and 'TIFF'. The central text is 'ECOLOGICAL RESTORATION'.

A map showing the greenway mobility master plan. It includes icons for 'Pedestrian Route', 'Bicycle Route', 'Traffic', 'Potential new Green spaces', 'Pedestrian bridges', 'Bicycle bridges', 'Existing bridges', 'Anhandui Ecological Parks I and II', 'Direction of flow', and 'Important buildings nearby'.

SAMPLE VISUALIZATION AND SECTION

Two photographs showing sample visualizations and sections of the greenway. The left image shows a cross-section of the greenway with a river, a walkway, and a park. The right image shows a cross-section of the greenway with a river, a walkway, and a park.

OVERALL PROPOSALS\_EXPLODED AXONOMETRIC

A large, detailed exploded axonometric diagram showing the overall proposals for the greenway. It includes icons for 'Functions', 'Ecological Approach', 'Green Coverage', 'Pedestrian route', 'Bicycle route', 'Traffic', 'Master Plan', and 'Existing Situation'. The diagram shows the spatial relationship between the different elements of the greenway.