

CLOSING

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1 1 / CONCLUSION

The intention of this dissertation is to question the current approach to sustainable design. It is developed by realizing what the impact of the built environment is on the global warming crisis, and acknowledging that it results in the loss of ecosystems. This led to the investigation of regenerative theories and the role architectural design can play in enhancing ecosystems and creating a mutually beneficial relationship between nature, man and the building.

Sustainability is slowing down the process of degeneration, and, although this is essential, it is insufficient. Developing relationships between living things is required to achieve a regenerative condition. Regenerating the evolving resiliency and matrix of life in each place is the other half of achieving a sustainable condition. Insect pollinators function as part of ecosystem services and are essential to humanity's survival. But they are threatened by global warming and climate change due to human actions. This led to the design of an insect research facility that creates ecosystems and habitats for the pollinators to enhance biodiversity and revitalize the earth's resources.

By applying regenerative theory and adapting Steward Brand's 6 'S', a new type of reciprocal element was discovered in the building envelope, which creates a mutual functional space where humans and nature can co-exist.

The implementation of green infrastructure on the site counters the destruction of natural habitats and allows

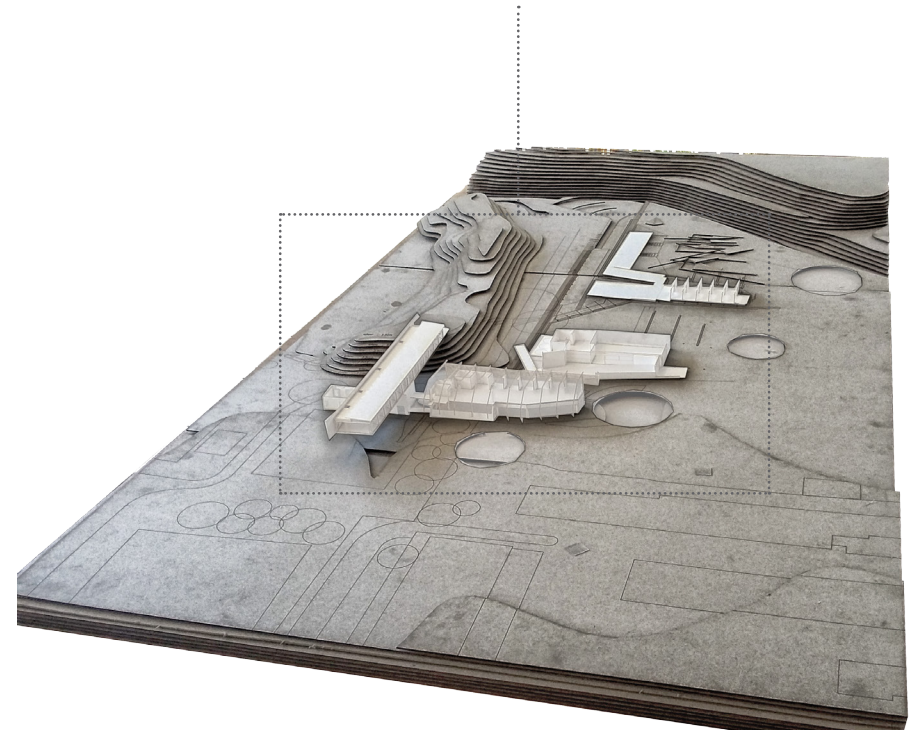
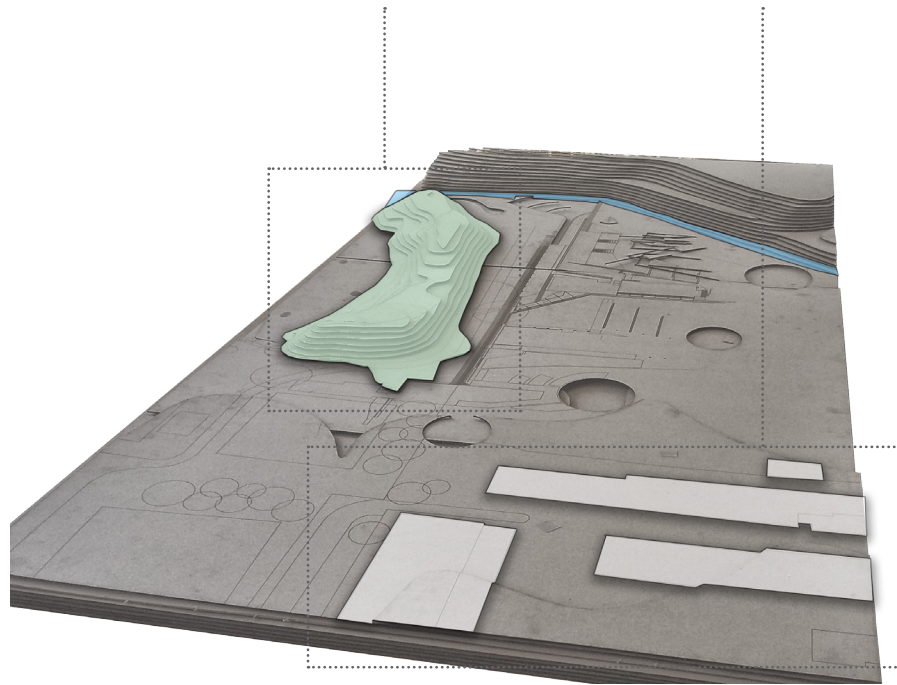
the increase of biodiversity to restore functioning ecosystems; safeguarding and enhancing natural features (Yeang, 2008: 128).

The proposed architecture allows for the restoration of destroyed habitats on the site by employing a series of water catchments and constructed water channels to assist in the growing of various plants and flowers and to create habitats and nutrition for wildlife. The building becomes part of the environment. Additionally, by utilizing the site as part of a building layer formed by the structure of the building, a habitable space for humans is created inside the building. The green facade not only creates habitats for insects but also controls the temperature inside the building.

Considering the principles of regenerative design; the building functions as a restorative device that gives back to its surroundings more than it takes away.

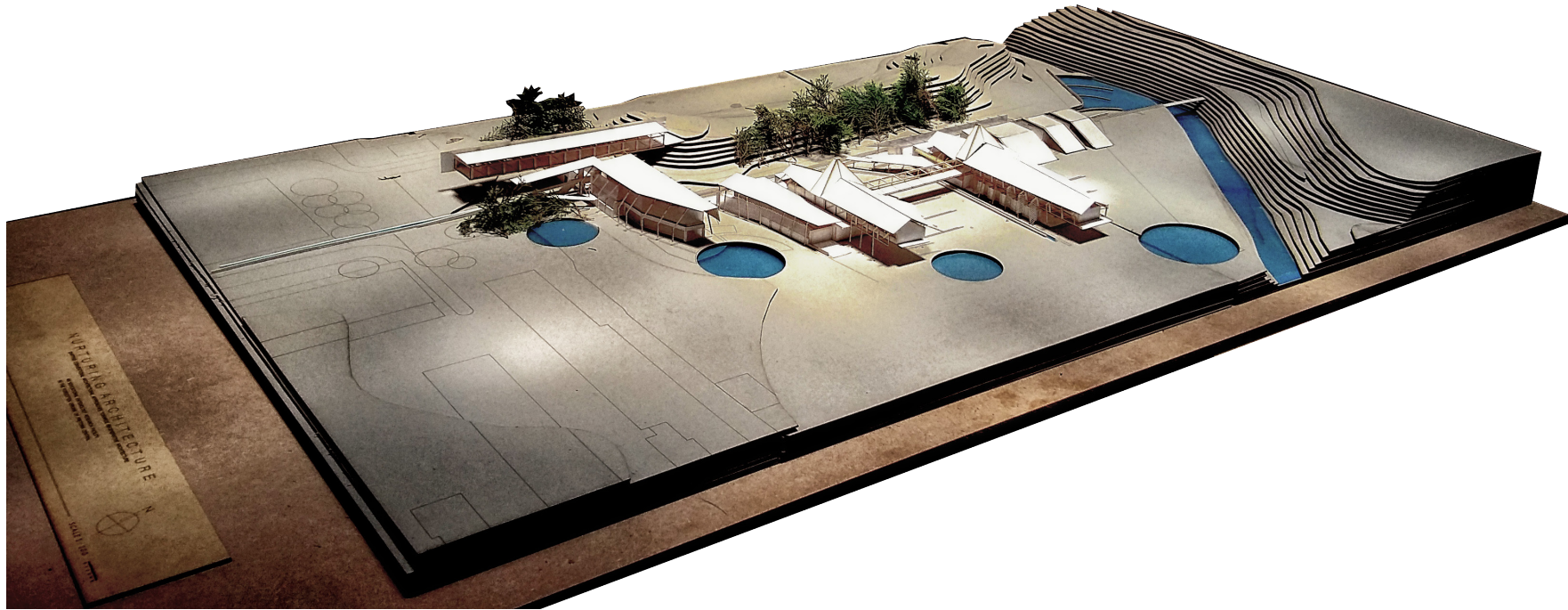
Existing hill, eastern boundary of Prinshof School Property
Pretoria National Zoo

Entomology Research Facility



11.1_ Site model in progress, before the placement of proposed building (Author, 2015)

11.2_ Site model in progress with the proposed building (Author, 2015)



11.2_ Final Site model (Author, 2015)



11.3_ Final Site model (Author, 2015)

11.2 / FINAL PRESENTATION





11.4_ Final presentation in room 3:15 Boukunde building 26 November 2015 (Author, 2015)