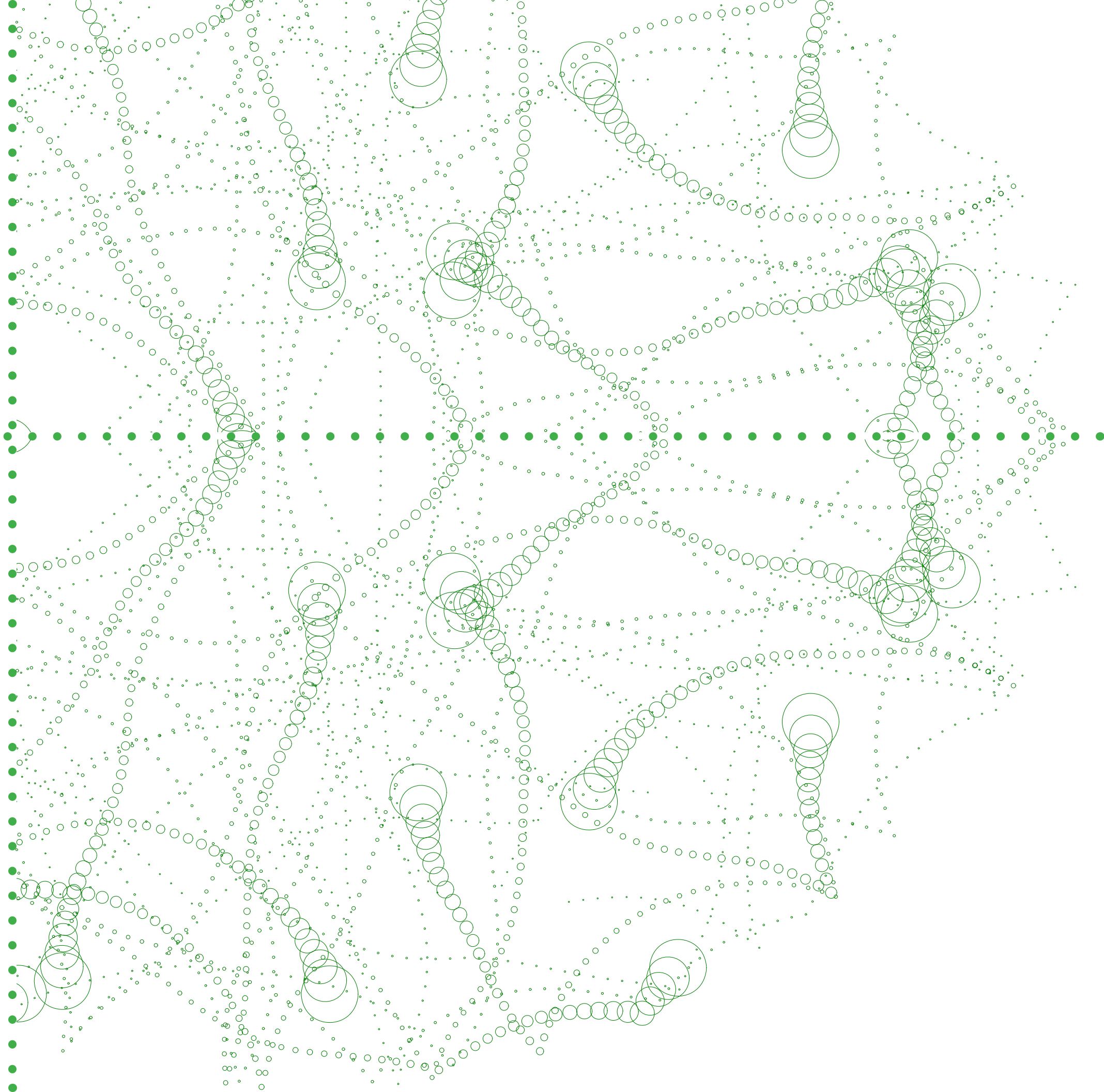
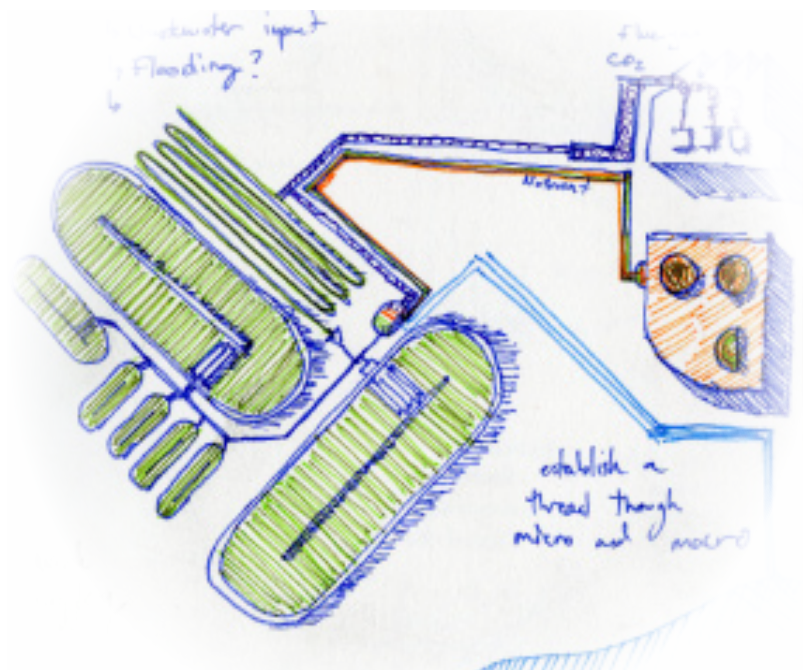
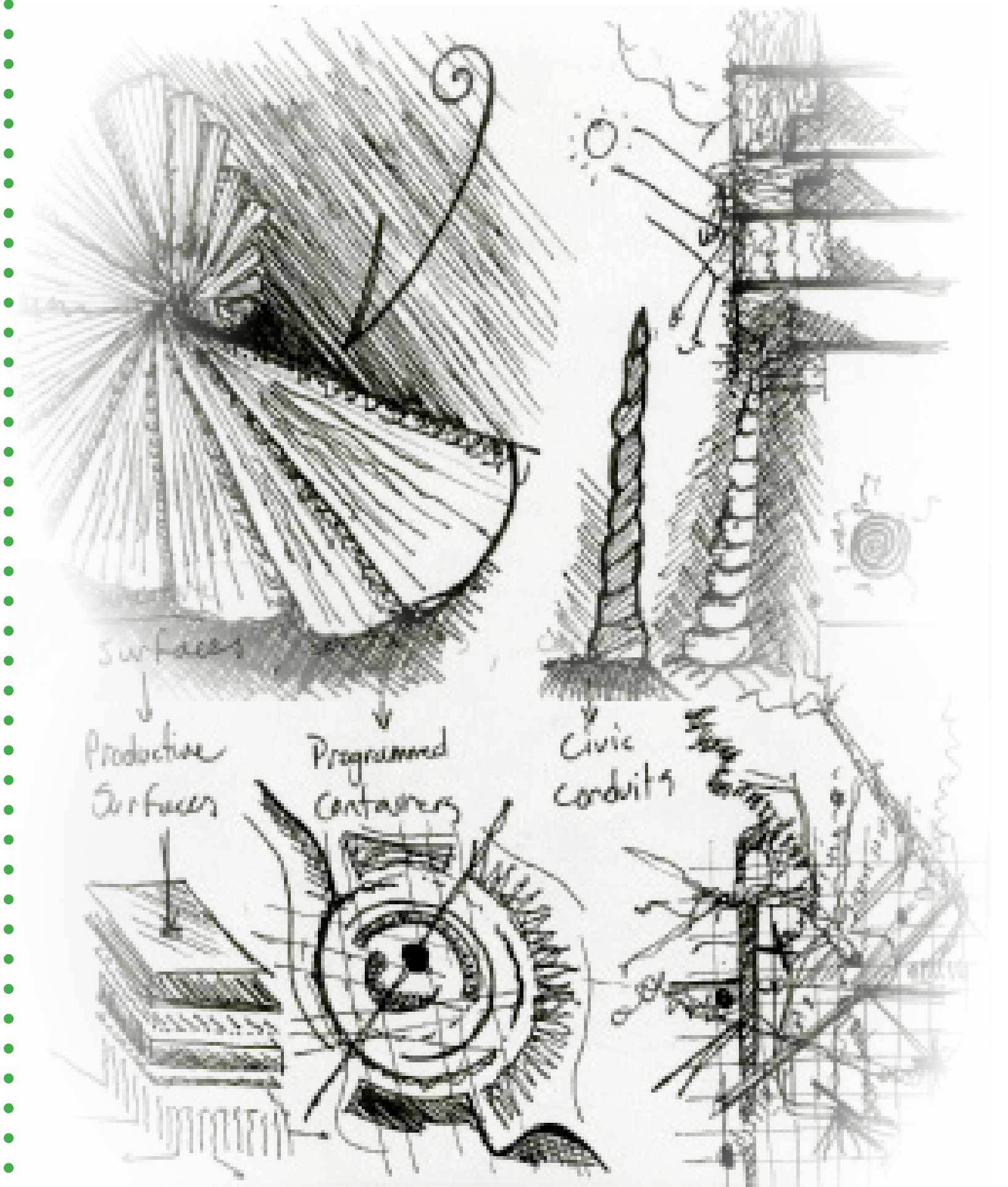


Assignment 2

Algae Biofuels Eco-Machine (Network Interaction)

Sean McGadden



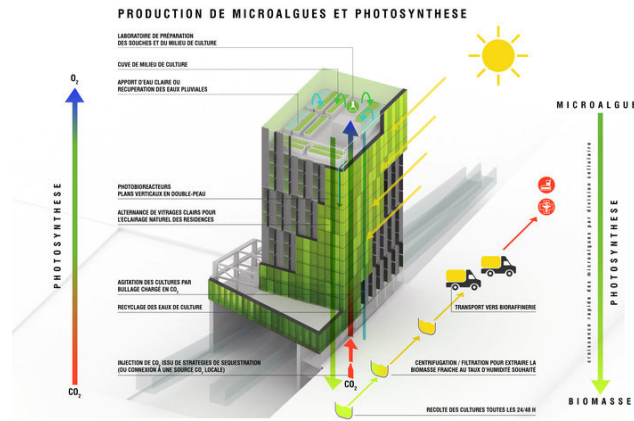


Hamburg, Germany ARUP
2013 First Algae Powered Building

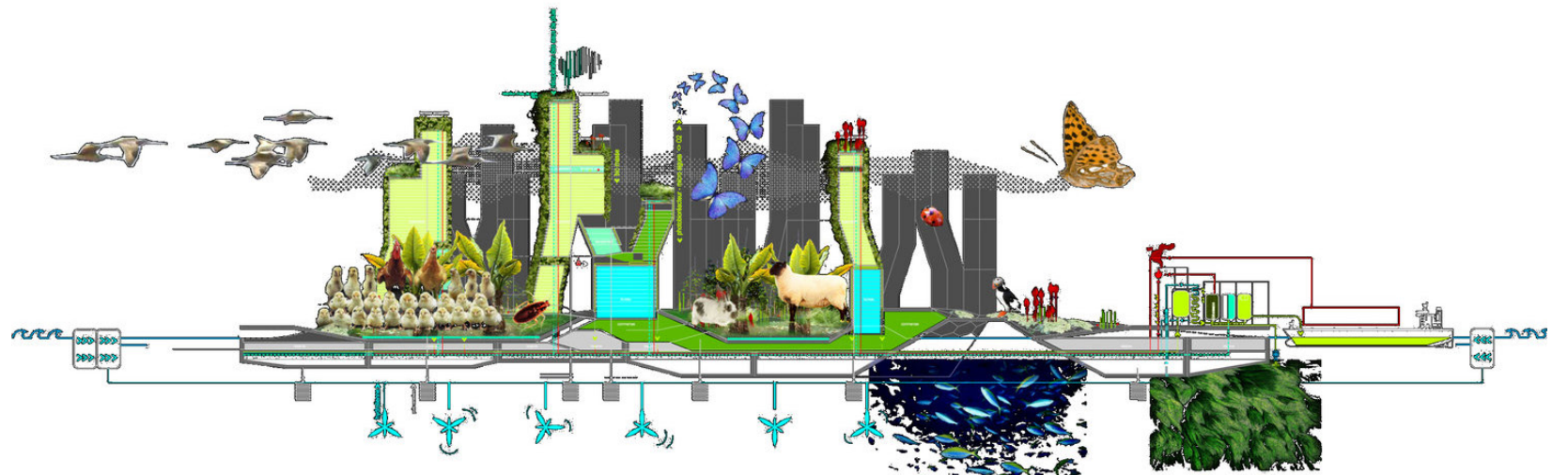
This building was among the first of its kind to pilot micro-algae as a renewable energy source while also generating shade for the building. On hot days with high amounts of solar radiation, comfort within the building is maintained thanks to the increase in production of algae. The number one factor in algal growth is exposure to sunlight. Algae is a natural DYNAMIC shading device. This building also uses biofuel as a renewable energy source produced by the shading devices.



IN VIVO, Paris, France, XTU
Anouk Legendre & Nicolas Desmazières
Convinced that living organisms will be the biotechnology revolution of tomorrow, XTU engages its innovative research on the themes of bio-inspired and photosynthetic architecture. In addition to these innovations, XTU also develops bio facades for cultivating plankton species on the exteriors of buildings and creating new architectural eco-systems.



XTU has been focused on the development of algae and microbiology design processes in sustainable design. This project below right is known as Fresh City. A contingent project known as Sea Ty also engages with ideas of energy renewability in large scale urban fabrics.



Biocircuit:

This project is an Algae research facility in the heart of Baton Rouge Louisiana meant to house, educate, and facilitate research of students and scientists alike. This building uses Algae as a sun shader as well as a passive solar gain system. The algae system is both a physical penetration of the programmatic volume and a constant reminder of the stakes of algae research and education as well as a sustainable future. Proposal for a Louisiana State University Research Facility 2016 / Unbuilt By Philadelphia University Graduate Landscape Architecture Students

thesis



THE INSTITUTE

Available for public and private research fellowships, the facility acts as a testing bed for algae biofuel technology, a training ground for new professionals in the field and an educational center for LSU and the community of Baton Rouge.



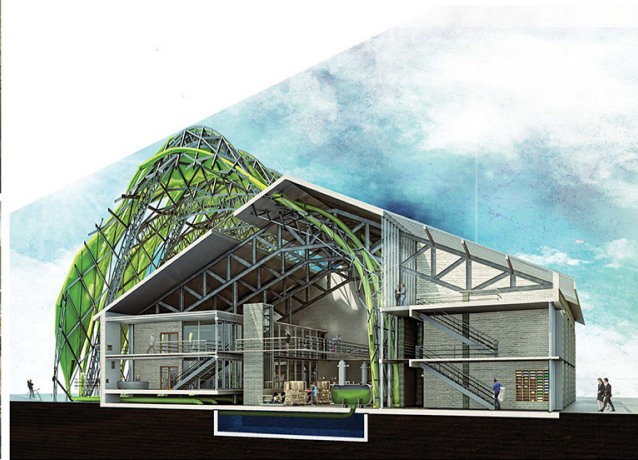
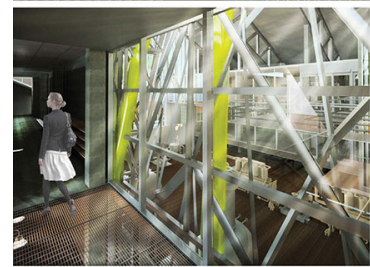
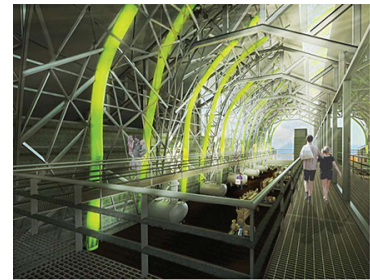
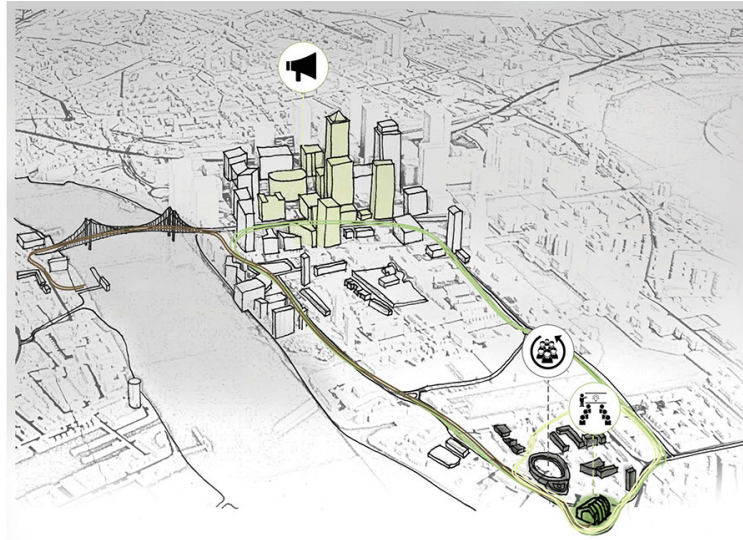
THE CAMPUS

Faculty and student research in the field of biotech allows for the campus to benefit from the advancement and expertise of both local and visiting professionals.

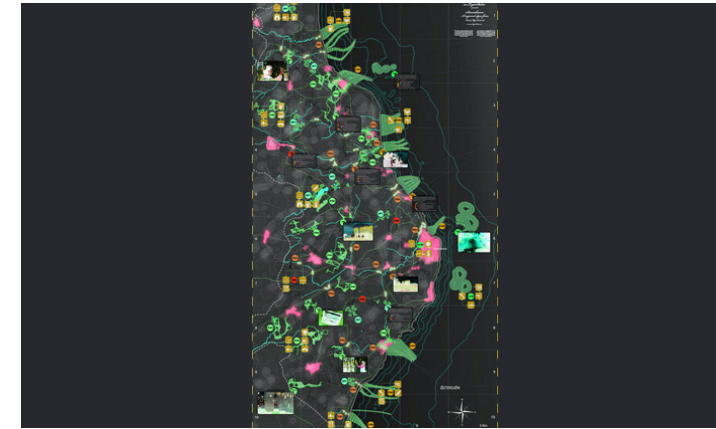
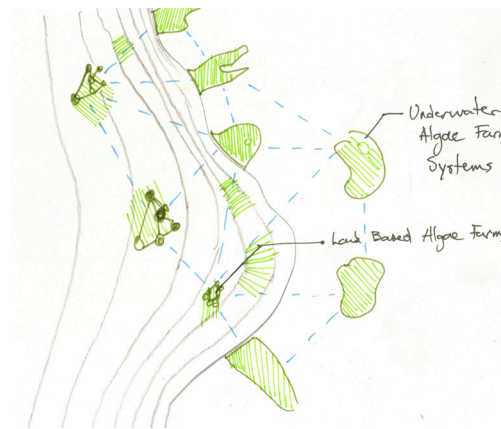
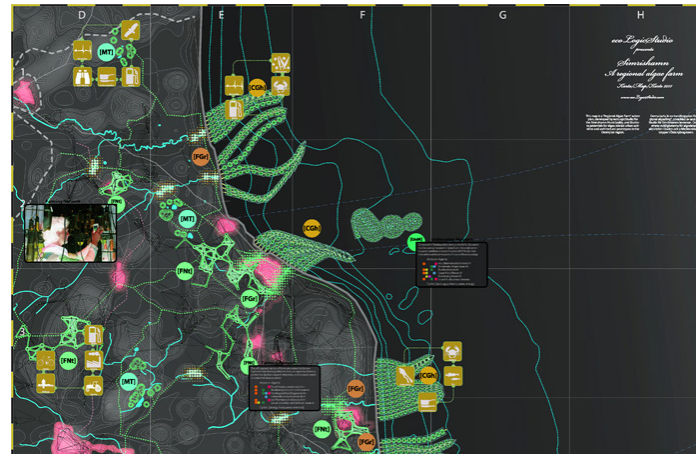
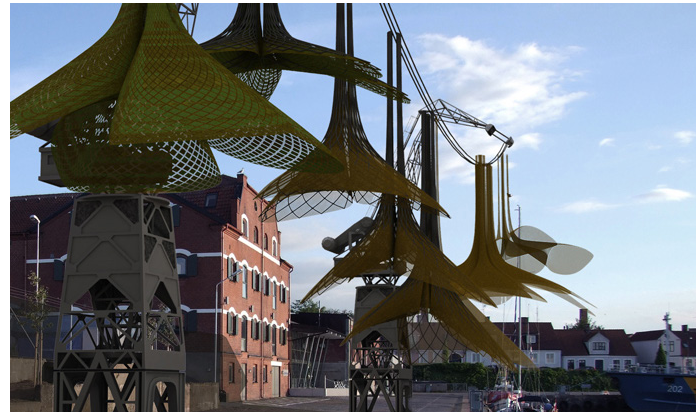
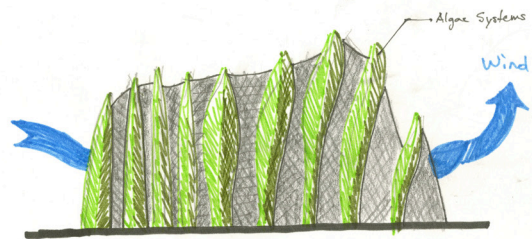
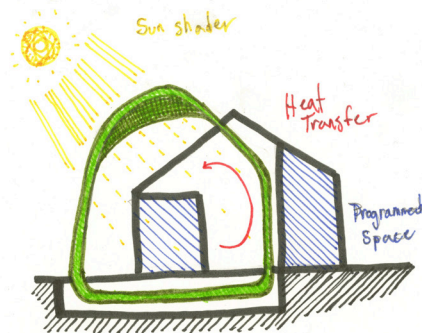


THE CITY

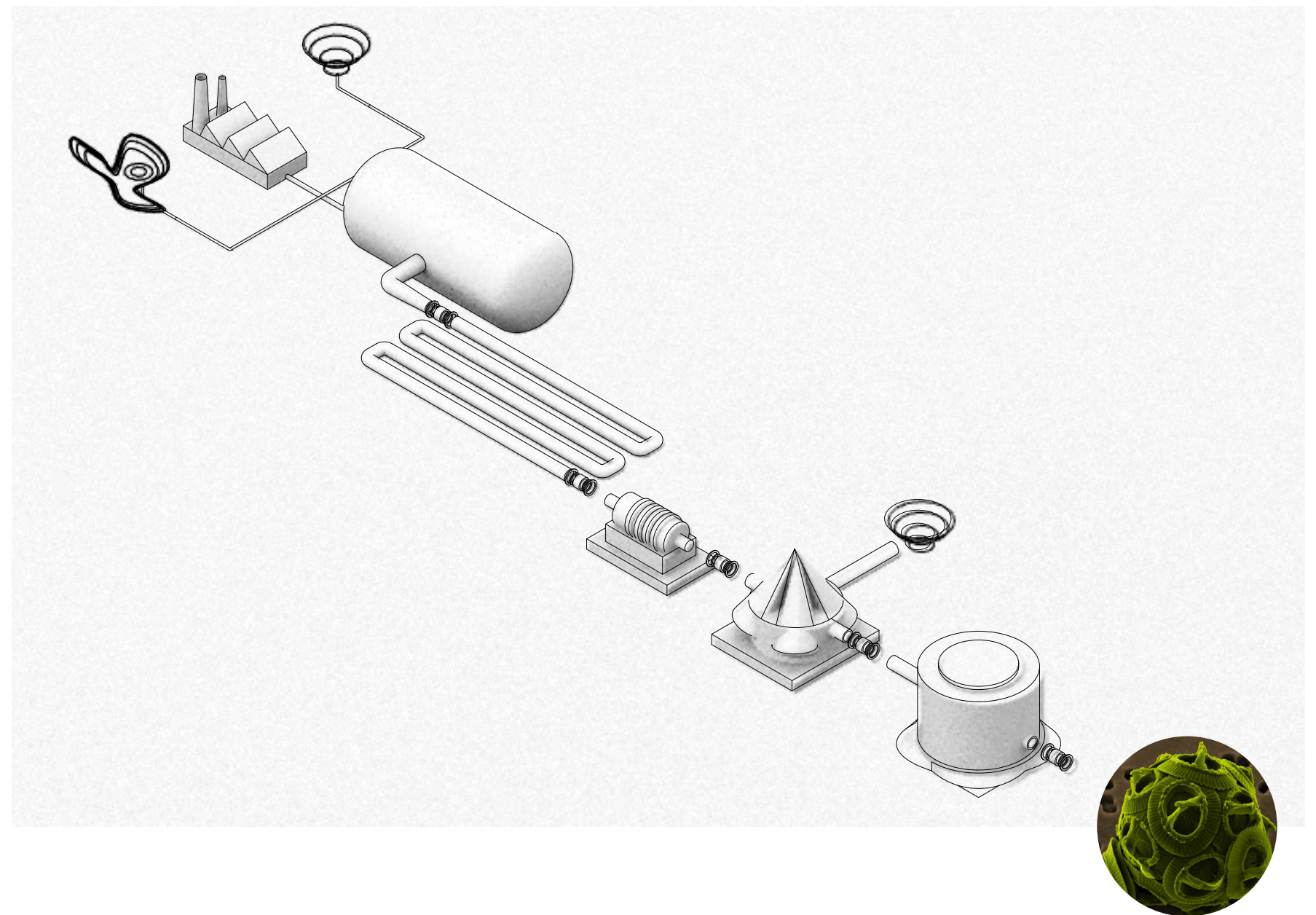
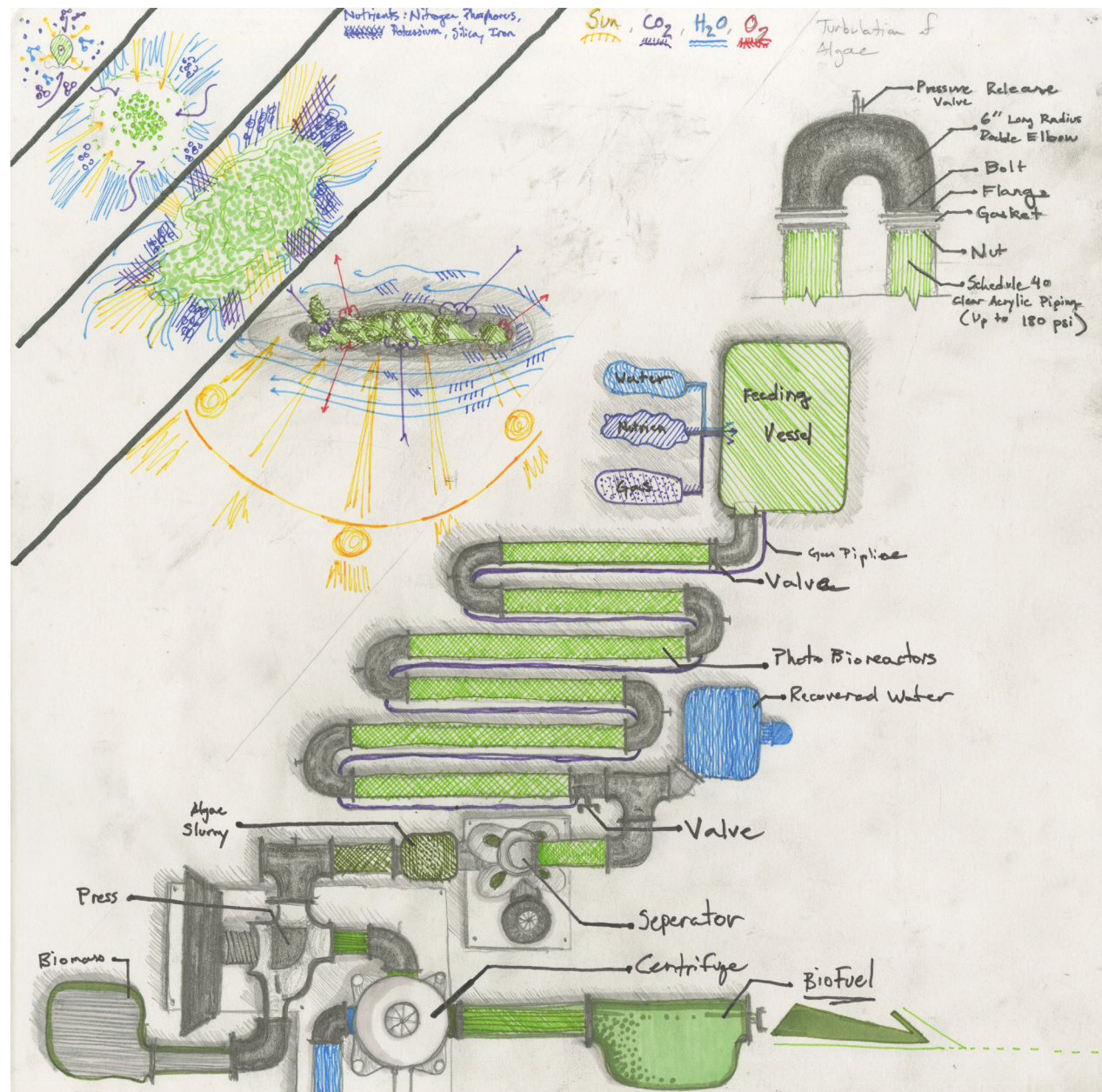
The LSU campus bus system also runs multiple routes through the heart of Baton Rouge, providing a public face to the research from the institute. Studies show that the economic benefits of algae biotechnology research include additional jobs and economic output.



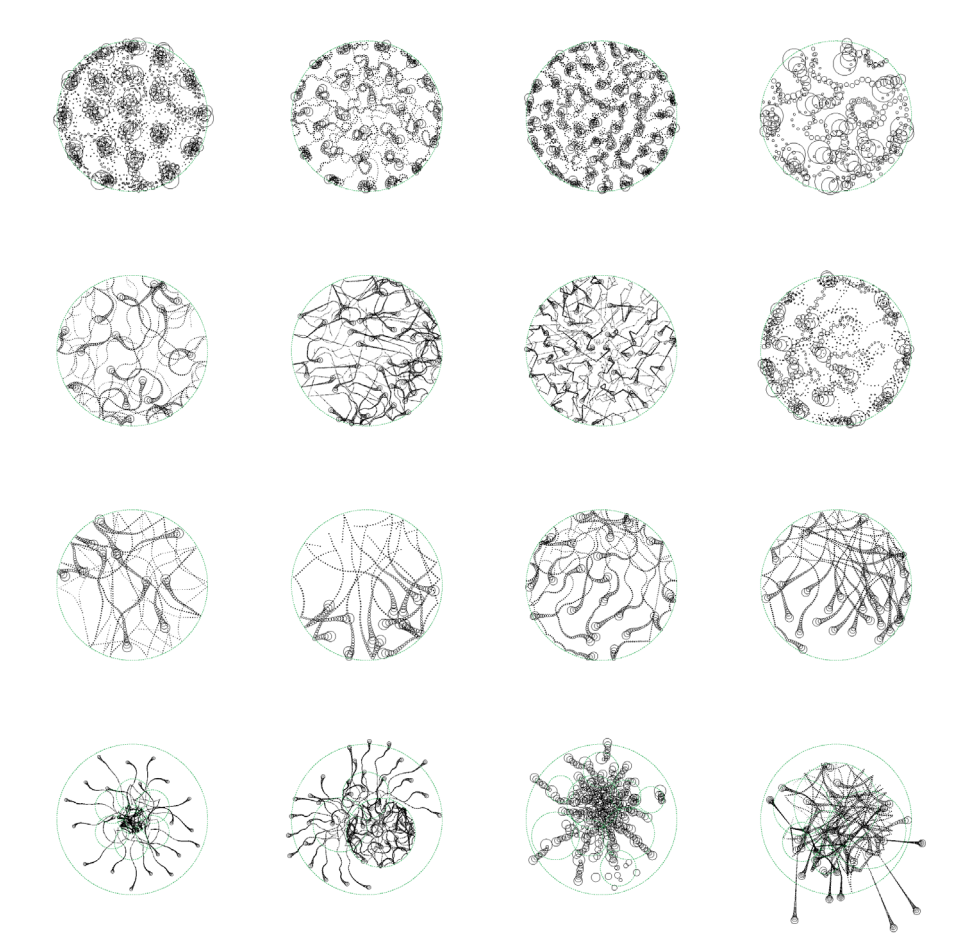
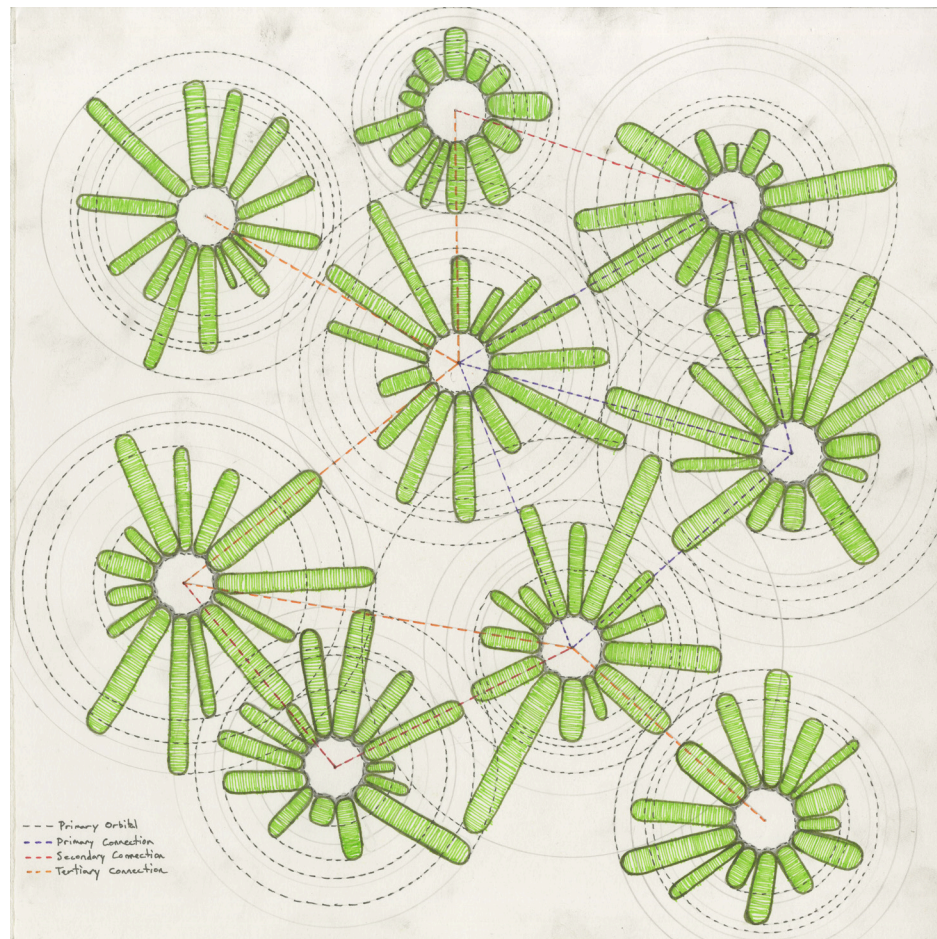
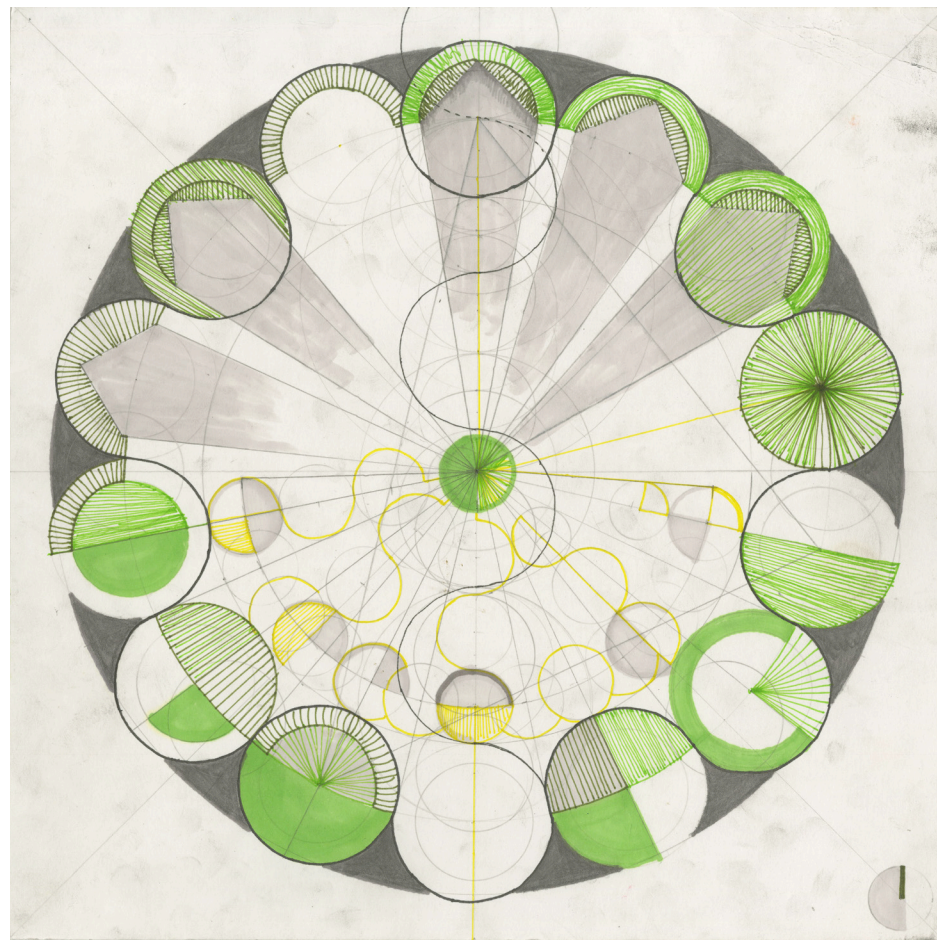
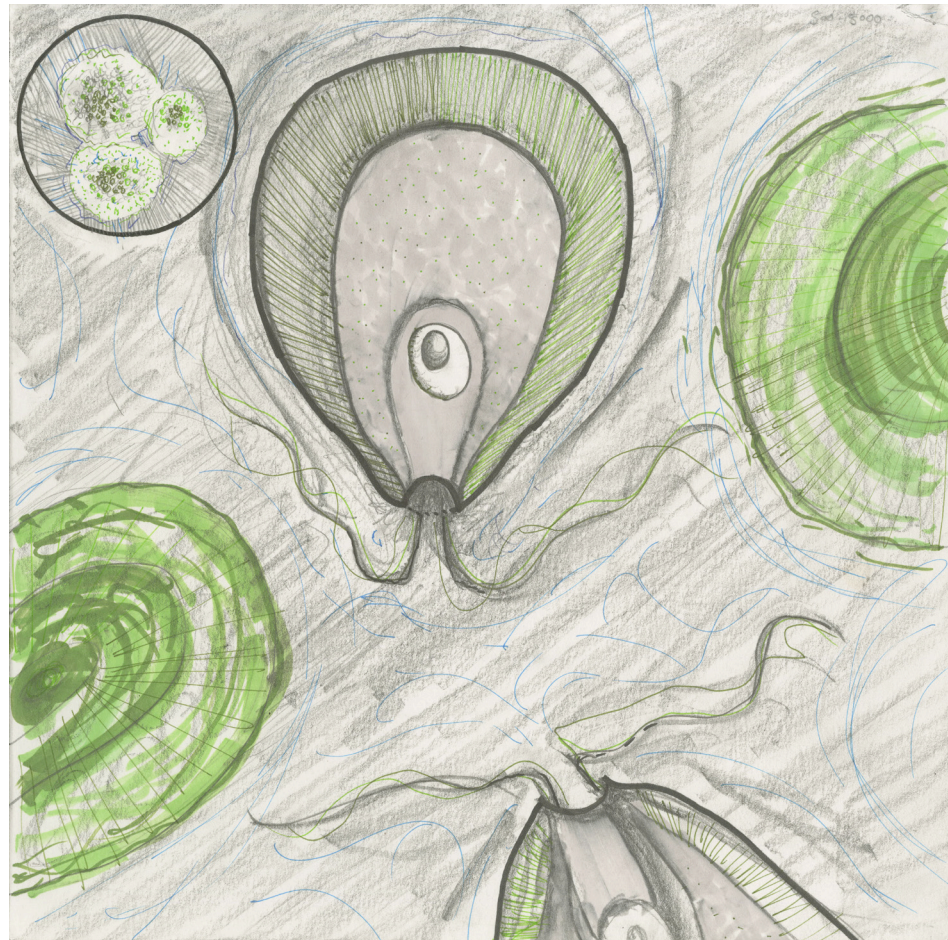
view from residence atrium

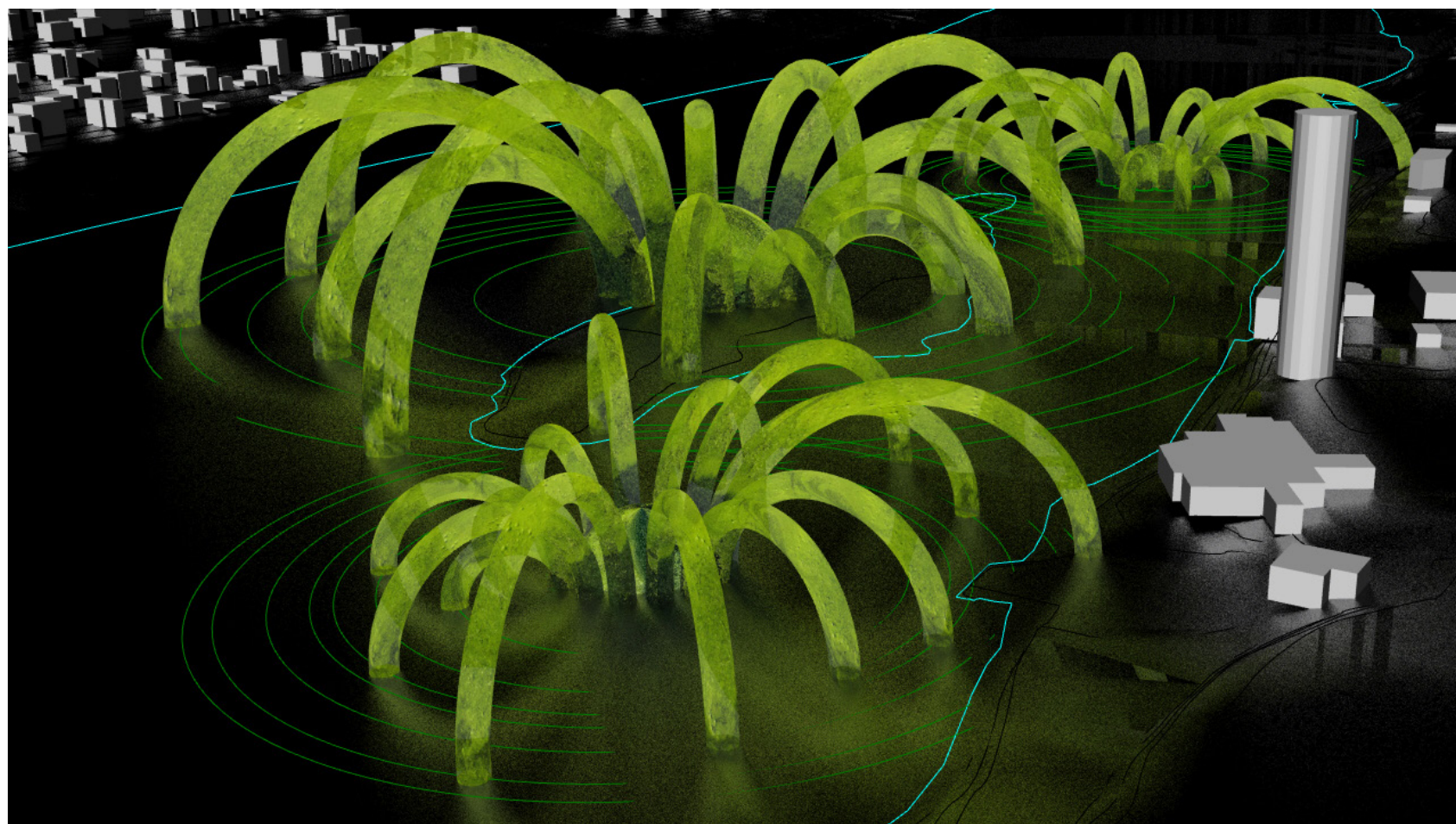
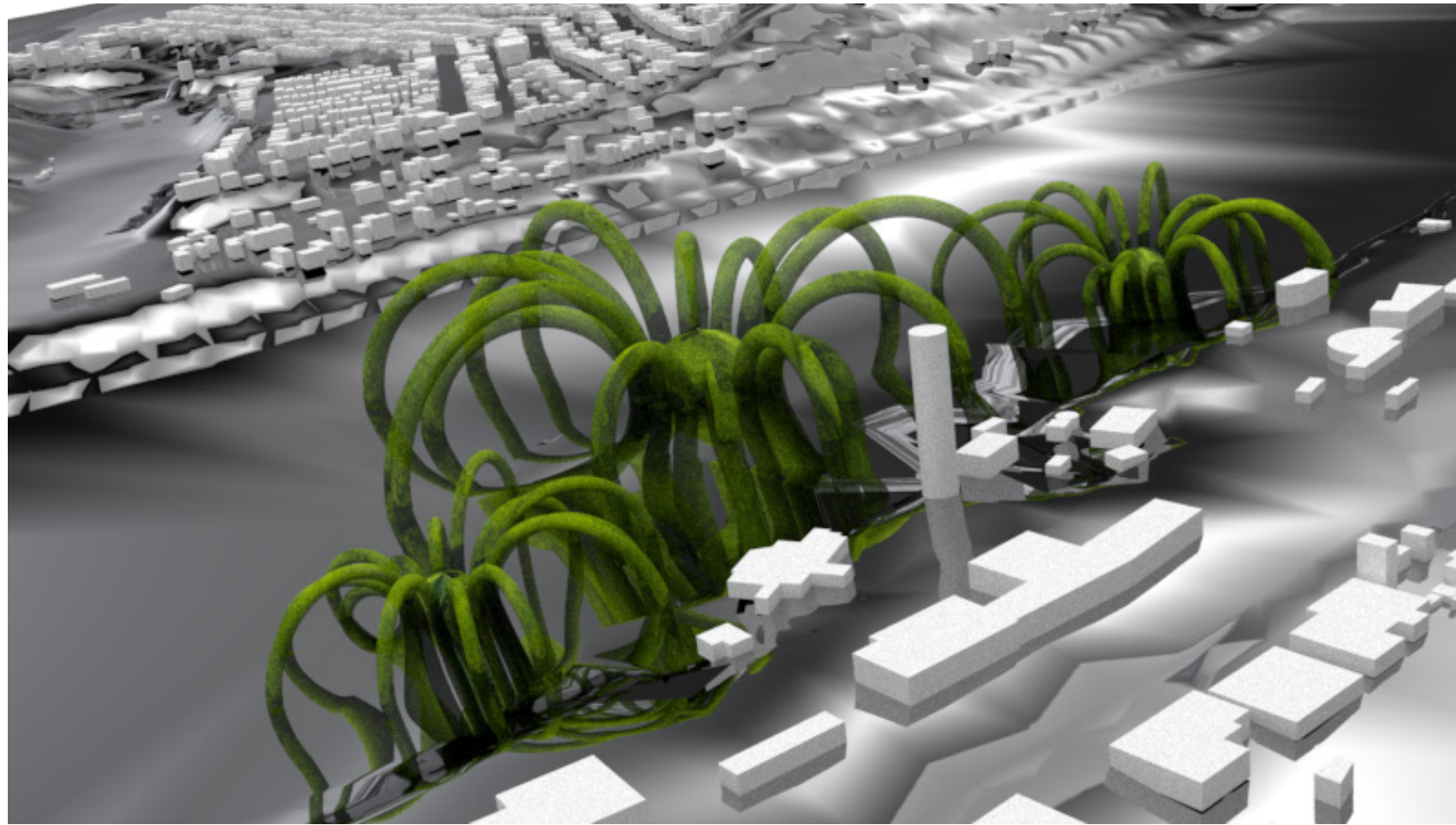


Algae Regional Farm
ecoLogicStudio
Location: Simrishamn, Sweden
Client: Marine Centrum Department, Simrishamn Municipality
This project is a masterplan for a community and participatory project along the coastline of the Swedish municipality of Simrishamn. These projects seek to educate, showcase and bolster algae as a renewable and sustainable energy source. In addition, there are a series of ecological and environmental initiatives to enhance biodiversity and maintain environmental stability as in this proposal below giving migratory birds a home, purifying wastewater as well as being a spa retreat.



Ecological and natural forces applied to a mechanistic or industrial aesthetic and formal tendency to synthesize a singular process for the betterment of the environment and the beings that occupy it.





This site is fascinating for all the ecological and anthropomorphic elements that all find themselves at an intersection. As such these maps will seek to explore both sides of the story. A narrative of environmental impact from both human energy and natural forces in a cyclical and temporal manner will inform the site and eventually the architecture that occupies it.

Understanding the potential for movement and energy forces acting on any site is integral in the formation of an architecture that can begin to engage its environment. This map begins to suggest the strength of environmental forces such as land wind and water that will significantly impact the architecture it accommodates.

