District 5: A living landscape made from our waste

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This is a design experiment that seeks to explore notions of reality and non-human oriented discourses. By looking to our ‘waste’ and pollutants as material builders, this project yearns for a new type of sustainability that fosters growth from waste products. This growth is what becomes a design mechanism for remediation of the land and offering a new type of terrain on which the evicted ecosystem may re-inhabit. A type of urban ‘reef’ that bridges nature and the synthetically alive.

The protocell will act as my co-designer in this experiment. They are “not merely materials or instruments that obey human-led architectural programs” (Dr. Rachel Armstrong, 2011), but offer a new ecological and sustainable paradigm for the production of architecture.

The protocell is a new type of material and method that will aid the design process in terms of architectural programs that go beyond the conceptual and practical constraints of modern design practices.

Reality: a ‘sick’ environment [site: Detroit’s Zug Island]
Remediation: remediate the stressed ecology and produce a new topography to allow the soil below to recover (phyto- & bio-remediation)
Regrowth: utilization of waste CO2 and heat in a chemical reaction with protocells to produce hardened matter [a new landscape to be inhabited]

Can protocells create a new landscape of matter from our waste that becomes a place for future generations to inhabit?
THE NOMAD, nomadic architecture... A ‘city’ ‘reconstituted from its own waste?
What is the result of a population of protocells programmed for a metabolic response to pollutant|waste-based CO2?
How can I channel the production and formation of matter?
How can this become architectural matter?
PHASE [THREE]
infrastructure:
carbon pipeline
- Water, carbon, trees and green plans and steel plans around the area, to pipe in to be injected in to the porous 'soup' (chemical reaction) water, allowing carbon in the porous plan to grow.

programmatic elevation
- Requirements:
  - Energy will be used for hydropower andeland at the water level, the energy generated for various purposes will be used through the entire system.

  research labs 3m
  testing area 10m
  living area 40m
  agricultural complex 60m
  science centre 6km
  police area
  floating station 5m

swarm (one)
- the first swarm are deployed in bioremediated site or base pipelines.

PHASE [FOUR]
swarm [two]
- Flooding of bioremediated sites occurs in order to cause the 'soup' (chemical reaction) needed for porous plant growth.
- Secondary swarms are deployed in bioremediated areas.
- Growth begins to emerge on the initial swarm - porous plants begin to grow - populations will gather along the base plans and produce thickened growth around the pipe - the more dense the swarm (at base level), the more growth will occur.

inhabitation
- program can now start to emerge on site by carving in to the growth.

PHASE [FIVE]
growth
- A vertical process of carving, sewing and growth occurs. The process can proceedly continue and push towards the top of the plants, using bioremediation by scaffolding, the plantlet for growth is continuously carved. In nature, there is no more want carbon and how to be harvested.

inhabitation
- program can be implemented when growth site become ready for carving.