

DAMON CHEN

NEW MEDIA ARTWORK PROPOSAL



**REVERBERATION
OF
LAND**

"TOWARDS A TECTONIC PLASTICITY"

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INTRODUCTION

The first part of the proposal documents my process of generating this project through experimentation and reinterpretation of tectonic plasticity.

My project was initially inspired by a stoneware No Sound C by Japanese artist Hayashi Yasuo. The reflection of its geometric surfaces, its natural rusted material texture, and its distorted form were the basic animators for my work.

The reverberation of Land is about exploring the effects of reflection and its distorted rippling effects on topography and artificial landscape. The project is a spatial experimentation through the agency of materiality, microbiology, and synthetic biology.

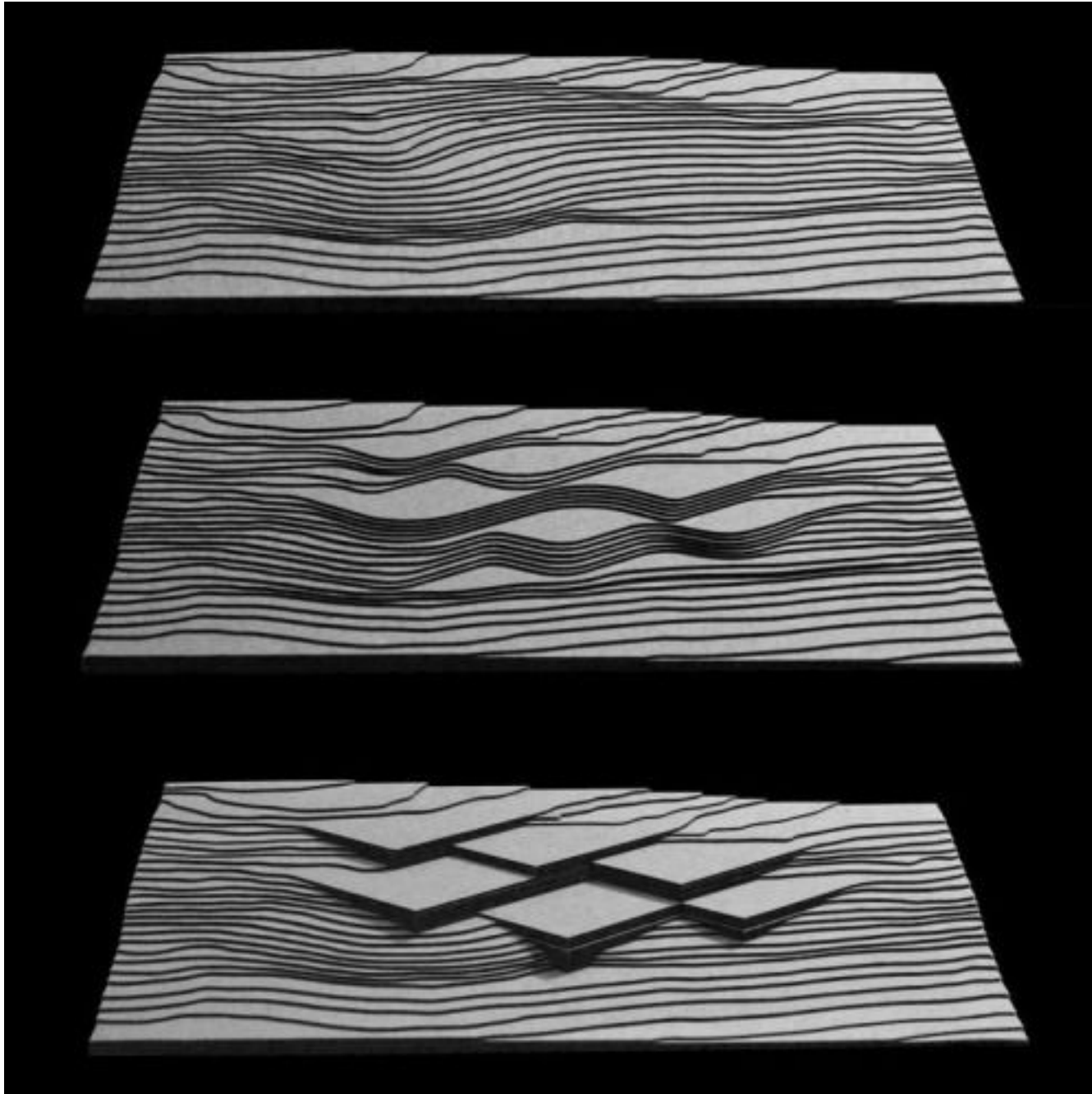
The motivation behind this is to build an artificial landscape as a nostalgic refuge for the overcrowded city. 50 years ago, many experts predicted that the global demand for timber is set to be tripled by 2050. The fact is that we are already running out of wood and organic habitats due to natural resource depletion and overpopulation. With the technology we have today, I decided to build a kinetic landscape consisting of living, moving, and breathing terrains and forests.

MATERIAL

BIOLOGICAL ENGINEERED LIVING MATERIAL (ELM)

Genetically Programmable properties of natural biological materials consist of self-assembly from simple raw materials, precise control of morphology, diverse physical and chemical properties, self-repair, and the ability to sense-and-respond to environmental stimuli. Now we can genetically program microbes to create entirely new and useful biological material.





PROGRAMMABLE STRATUM

When cement (an aggregate made of various materials) is mixed with water, sand and stone and left to dry, it forms concrete - the basis of the vast majority of previous old buildings. But concrete is porous, allowing water and chemicals through, which degrades the concrete itself. On a molecular level, concrete particles form randomly, allowing space for liquid and other compounds to pass through.

There is a method for 'programming' the molecular structure of concrete as it sets, and after it sets, by adding a genetically engineered bacterial spore to this synthetic material. This means that people could 'tell' the cement to form into more tightly packed cubes, spheres, diamond-shaped structures, or even back to its original liquid forms. This allows people to freely control the state, shape, and form of concrete, making it into a malleable material.

GENETICALLY MODIFIED CORALS SUBSTITUTES FOR TREES



Genetically modified corals can permanently live in terrestrial habitats. Their reproduction allows them to efficiently propagate or farm huge numbers of colonies, which is extremely helpful for afforestation and urban landscaping.

Their flexibility allows them to create novel shapes and forms. Unlike a plant, they need to capture food with their tentacle-like arms constantly in order to survive. These motions are able to compose a constantly changing and moving landscape. Their symbiotic relationship with algae could greatly decrease the effort and cost of maintenance. When stressed by changes in conditions such as temperature, light, or nutrients, they expel the symbiotic algae living in their tissues, causing them to turn completely white. Aesthetically, coral is more dynamic and alluring than wood.

DESIGN

ABSTRACTION

I create drawings and images that conceptually transform the material and geometric silhouette of the vessel through a spatial amplification.



Spatial re-interpretations and conceptual abstraction of the idea of distortion through reflection

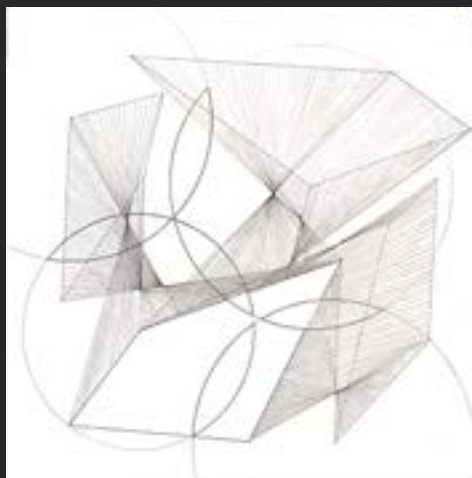


There are many kinds of reflection. Initially, I'm drawn to the reflection projected on water and the gorgeous rippling effect it creates.

(Abstract digital images of reflection created as concept board)

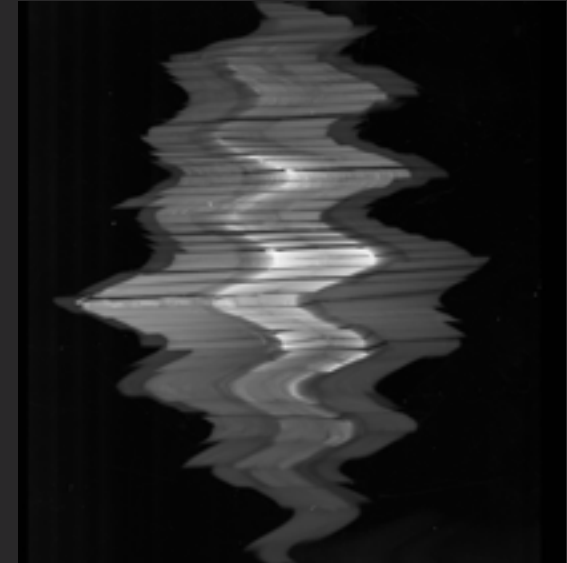
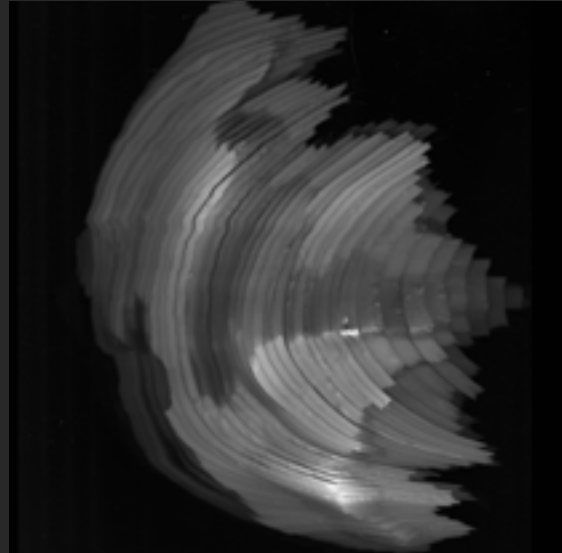
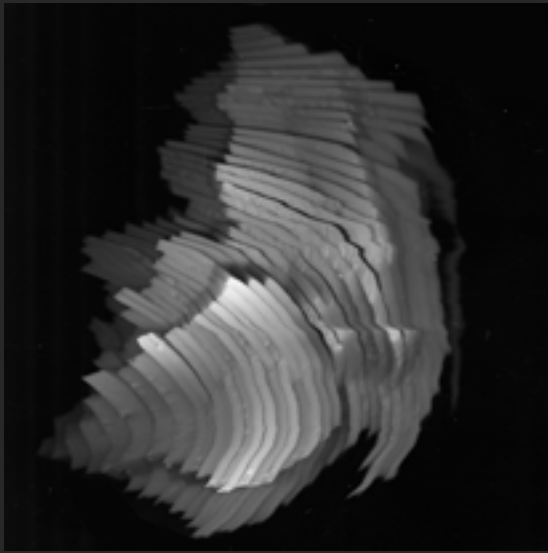
FIELD CONDITION DRAWINGS

In addition, I graph these field condition drawings to reflect the water's dynamism and sense of flow in a spatial matrix. They are working concepts derived from experimentation in contact with the real.



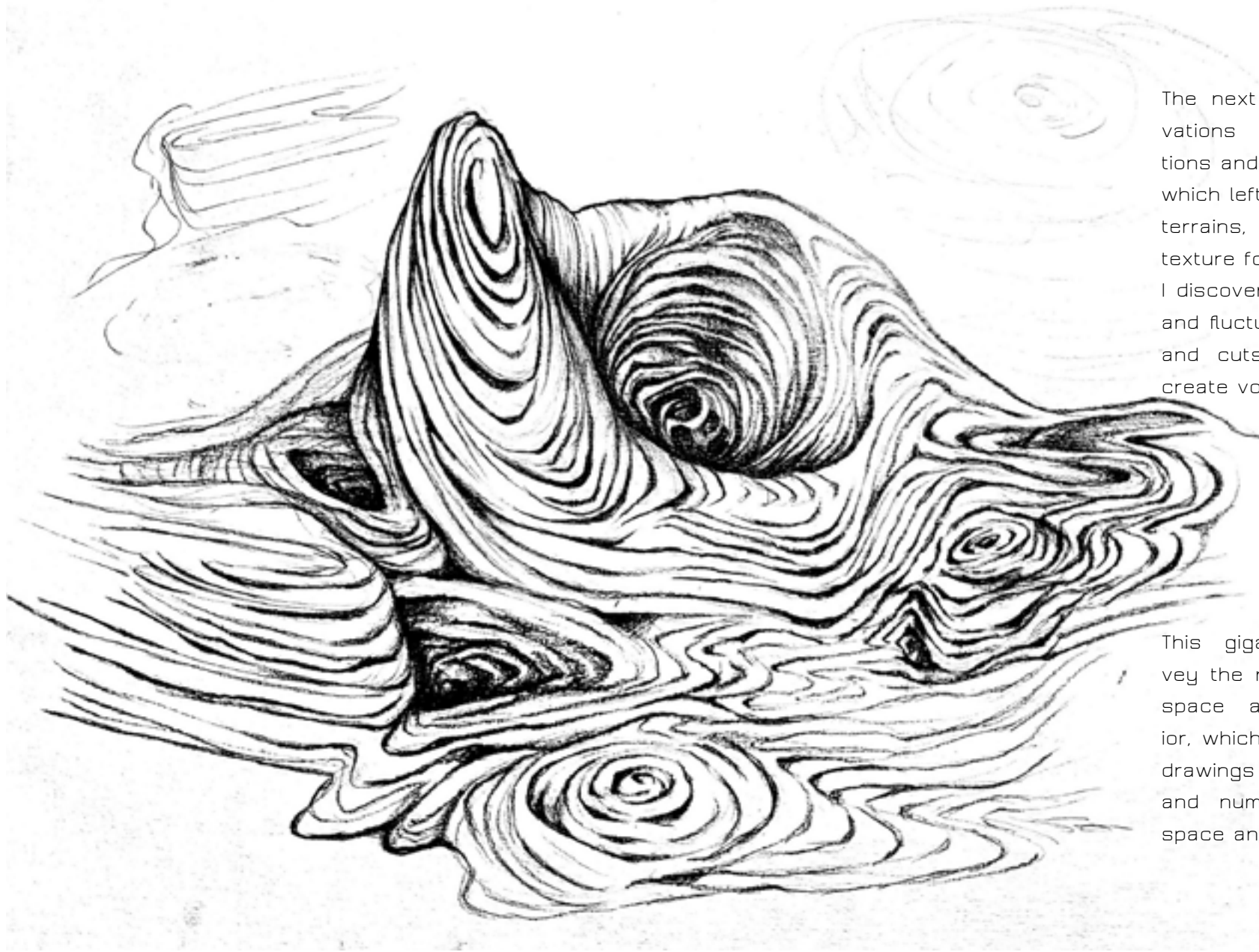
Field configurations that map out rippling effects and reflections with points and lines





REVERBERATION

An idea struck me when I saw the name of the vessel, 'No sound C'. I realized that the idea of reflections can also be represented through echoes of sound. This is the turning point of this project. These sets of drawings are inspired by Fetal Ultrasound used during pregnancy, combining with the rippling effects of liquid.



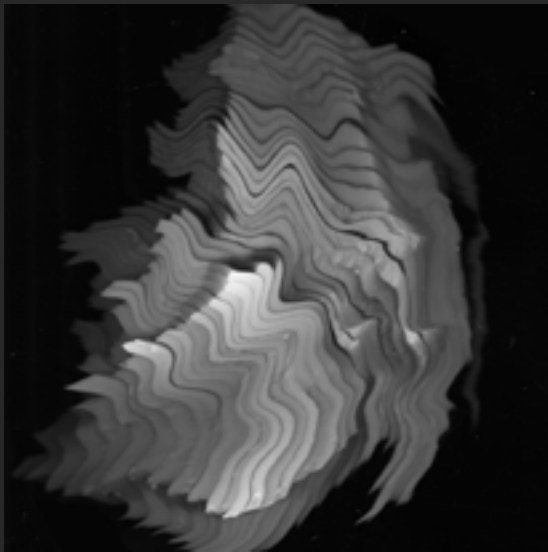
The next step is my observations on blurring repetitions and cuts through space which left me these malleable terrains, formulating physical texture for ripples on land.

I discover that the oscillation and fluctuation of these lines and cuts actually begin to create voids and spaces.

This gigantic artwork convey the relationship between space and human behavior, which helps me generate drawings of plans, sections and numerous iterations in space and form.

SPATIAL ITERATIONS OF REVERBERATIONS AND RIPPLES ON LAND

From there, I began to look at the ideal proportions of the artwork and how they begin to cut through spaces. I decide to translate that into figures in these sets of drawings. I build three different cases, playing with scale, time, and patterns.



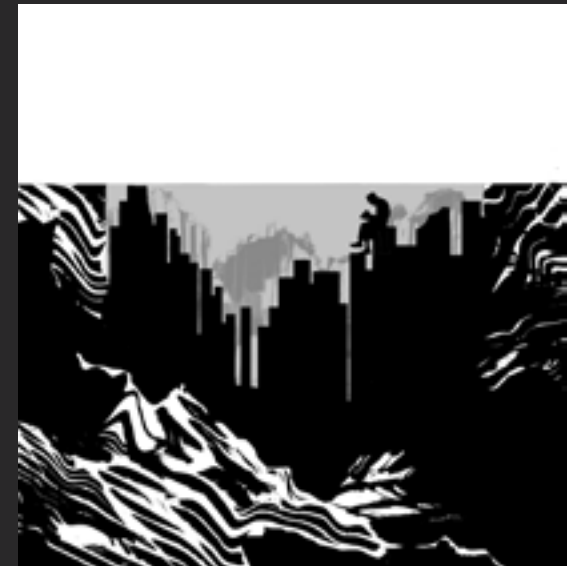
LANDSCAPE PICTURE TITLE

Drawing that further liquify and Intensify the idea of reflection from previous work.



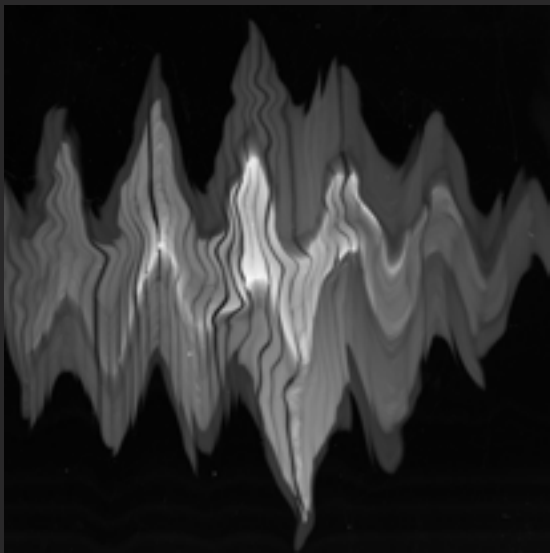
PLAN VIEW

Elevated plan view of this ideal landscape. The lines here represent sediments, layering, and space throughout time.

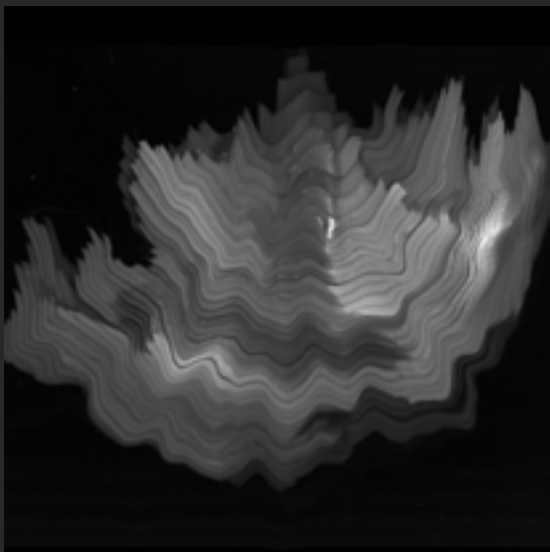


SECTION DRAWINGS

These are one scale interpretation of my project. An insight of practical usage of this landscape architecture.



CASE 2



CASE 3

