

CampBoo

A proposal for a camping site infrastructure that utilises regenerative design principles and forward-thinking methods, offering an enhanced and regenerative approach to the future of camping.

CampBoo



Problem

In Canton, China, camping infrastructures are generally underdeveloped. With a lack of care by individuals and minimum government funding, there are usually no managing systems for camping sites and shelters that provide basic needs for the campers. This leads to popular camping sites filled with trash that damages the local environment and ecosystem and ruins the original goal of camping.

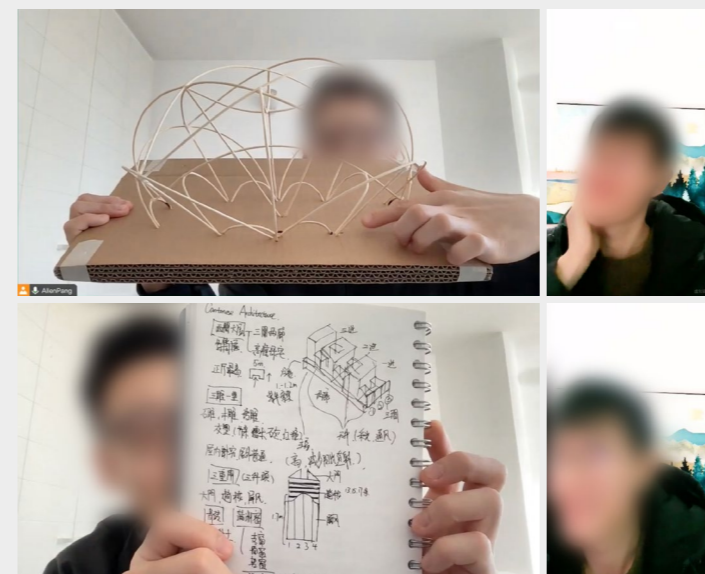
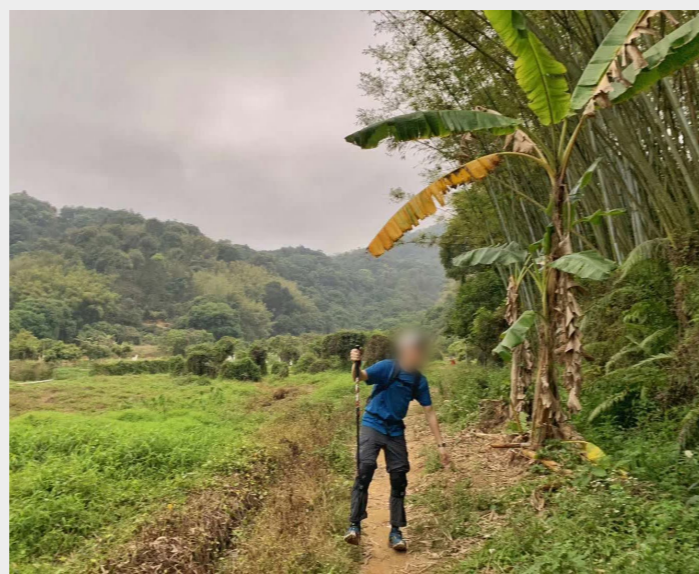
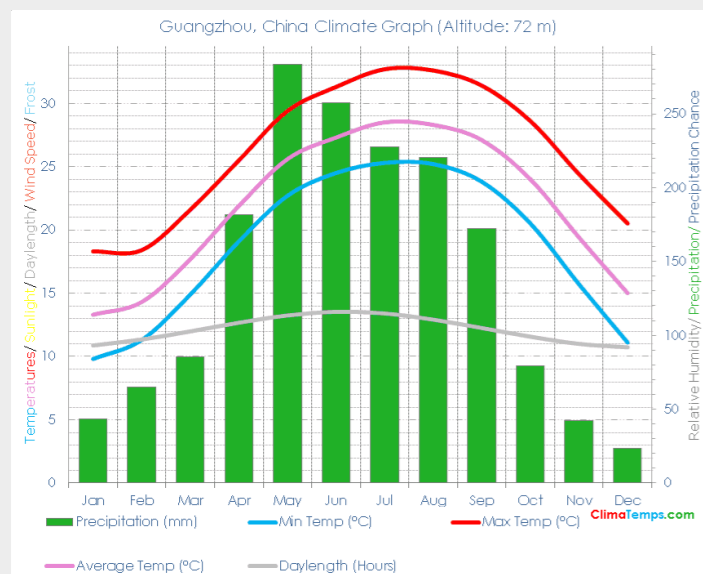
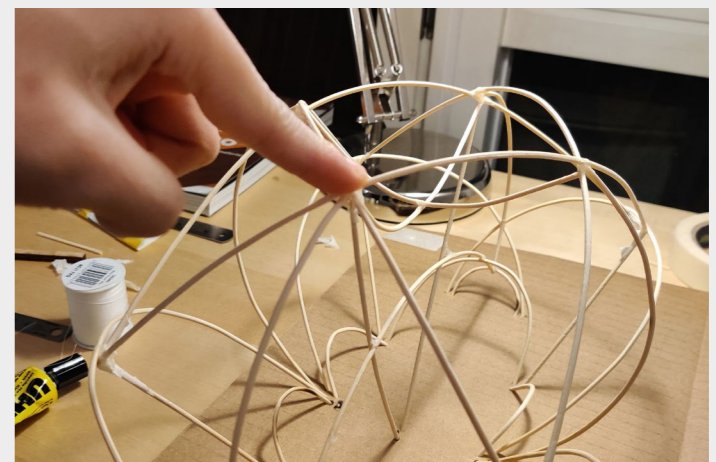
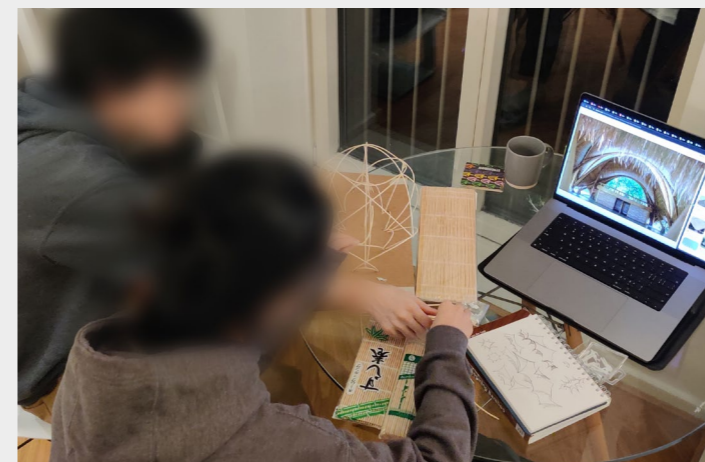
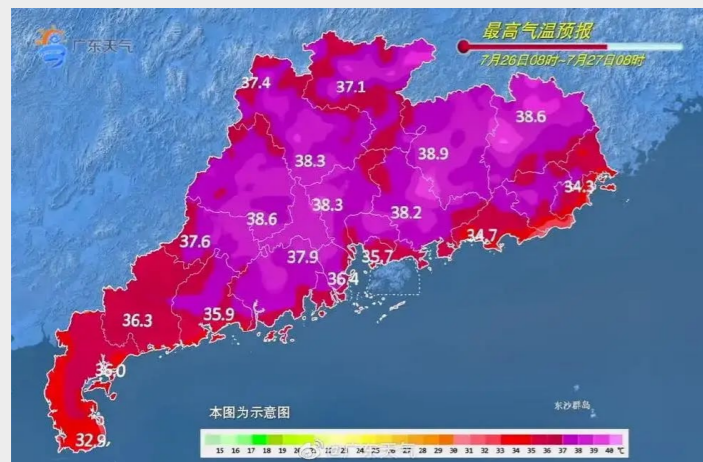
Geographically, in addition to the pleasant temperatures in winter, the other three seasons are unbearably hot and wet, making people choose to stay in air-conditioned rooms instead of going outdoors.

Process

Using personal experiences from the past and interviews with fellow campers and professionals in this field, I discovered that we can make many improvements, and collective efforts from local governments, non-profit organisations, and individuals will be needed to make them realise. I went through extensive and rigorous research for regenerative design in general, research for local specifications, and workshops and talks from experienced individuals to get to my final design proposal.

Proposal

My proposed intervention/solution is a bamboo-made infrastructure model that incorporates regenerative methods and materials designed and suited for Cantonese localities and weather and minimises human traces and environmental damage. The infrastructure will provide basic functionalities and shelter for the campers' needs while also acting as an educational site to pass down the methods of regenerative thinking.



Guangdong Meteorological Service (2022) Temperature distribution map, 广东省气象服务中心微博. Available at: <https://weibo.com/gdweather> (Accessed: 14 March 2024).

Guangzhou Climate & Temperature (no date) ClimateTemps. Available at: <https://www.climate.top/china/guangzhou/index.php>

Souza, E. (2017) If We Were To Design The Ideal Building Material, It Would Look A Lot Like Bamboo, archdaily. Eduardo Souza. Available at: <https://www.archdaily.com/885748/if-we-were-to-design-the-ideal-building-material-it-would-look-a-lot-like-bamboo> (Accessed: 15 March 2024).

Materials

We place a strong emphasis on locally sourced materials, which will reduce our carbon footprint.



Bamboo

Used in most of the main infrastructure as a based material. Bamboo is a durable, flexible, and regenerative material used in many Asian architectural traditions due to its fast-growing characteristics and robust versatility. Máo Zhú (*Phyllostachys edulis*) is the best species of bamboo to be used for building, and it is commonly grown around the Cantonese region, which makes it easily accessible and more sustainable to be transported to the site. It suits the local climate and weather conditions with proper treatment and insulation methods. It is also cheap, which lowers the project's budget.



Steel

To be used only for rooftop rainwater collection and storage, as steel prevents water from getting bacteria and harmful slime. The heaviness of the steel is taken into consideration, and proper support will be installed to ensure it integrates well with the main structure.



Stones

Sourced from local areas, stones are to be the underfoot of the main infrastructure for extra protection and moisture prevention.

Location

A plain field on a mountain near Canton, China. On a previously existing popular camping location.



Climate

Tropical climate. Large amounts of rainfall are concentrated between April and September. Long summers of humid, hot and rainy weather. Warm winters with occasional temperature drops.

unknown (2022) 广州新晋山谷露营地!坐拥山泉溪流, 野奢玩法十足 | 瓦尔登营地, souhu. unknown. Available at: https://www.sohu.com/a/584048418_685105 (Accessed: 15 March 2024).



Animals

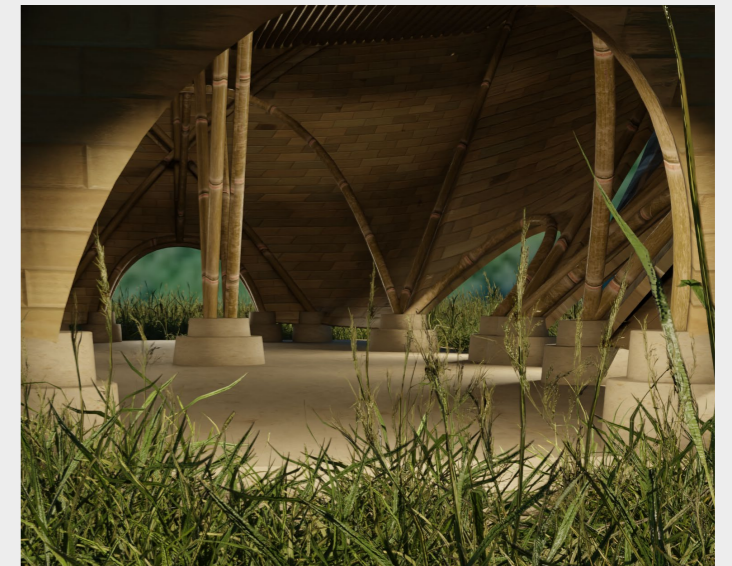
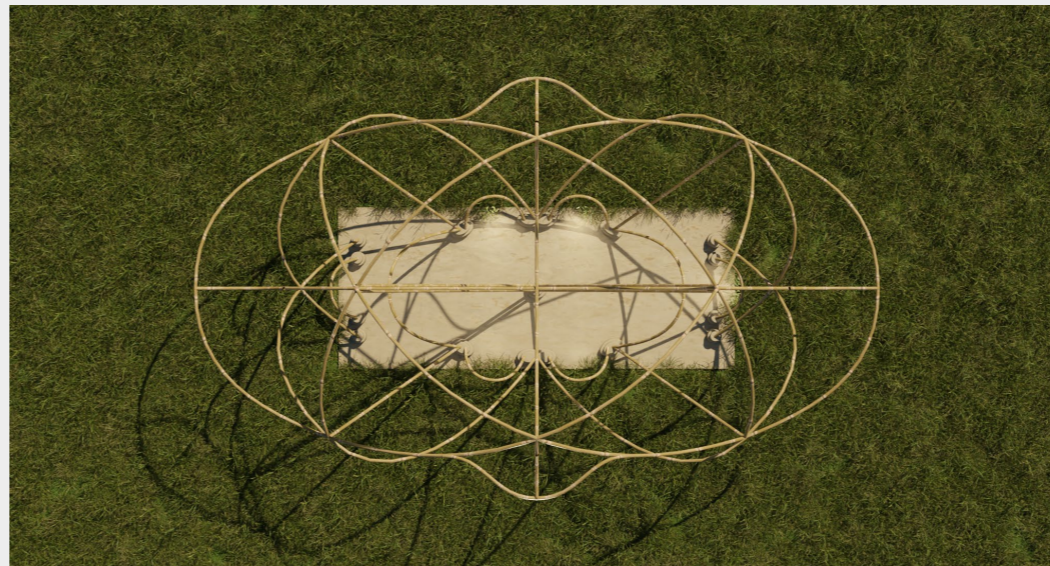
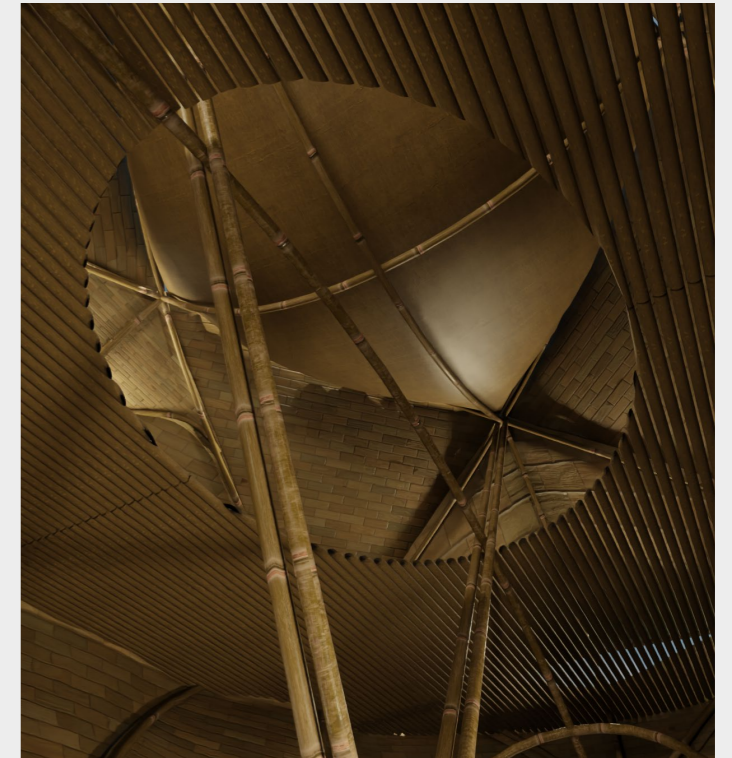
Small mammals, like tropical bats, squirrels and mice. Birds like wildfowl and silver pheasants. Reptiles like bamboo vipers. Insects like crickets, dragonflies, grasshoppers, cicadas, and beetles. Different species of frogs.



Vegetation

Mainly tropical and subtropical moist broadleaf forests intermixed with coniferous and deciduous trees and small amounts of Máo Zhú (or tortoise-shell bamboo) forests.

Main Infrastructure



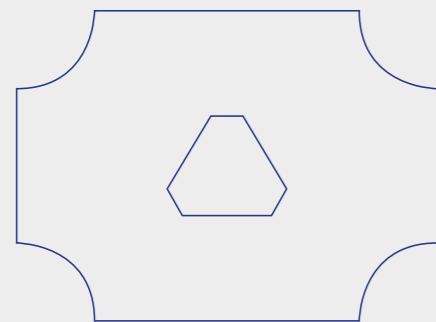
The main structure of CampBoo is a two-floored shelter infrastructure mainly made from bamboo materials sourced from reliable local suppliers. The infrastructure design takes inspiration from traditional Cantonese architecture while considering the characteristics of bamboo material and the local climate. It consists of an organically wavy roof supported by columns of bamboo underneath. The infrastructure is raised about 50cm from the ground using stones as a moisture barrier.

Located in the middle of the roof, a rainwater collection pot made from steel is connected to a water filtration system underneath to provide drinking water. Opposite two sides of the structure are extended towards the outside and hollow, creating an aerodynamic system to allow wind to come through inside to provide natural ventilation and passive cooling during hot days. On both sides of the structure, a compost toilet is placed with a removable compost toilet bucket to take to the compost chamber outside. Solar panels are placed on the top of the roof to collect solar energy for lights.

Two floors are connected by ladders. The ground floor is mainly used for communal areas, tents, water, and toilets. The upper floor has space for the water tank and filtration system and a small space for tents. Both floors have AED installed.

Other Infrastructures

peacenamchung (2021) 南浦有菜, instagram. peacenamchung. Available at: <https://www.instagram.com/peacenamchung/> (Accessed: 15 March 2024).

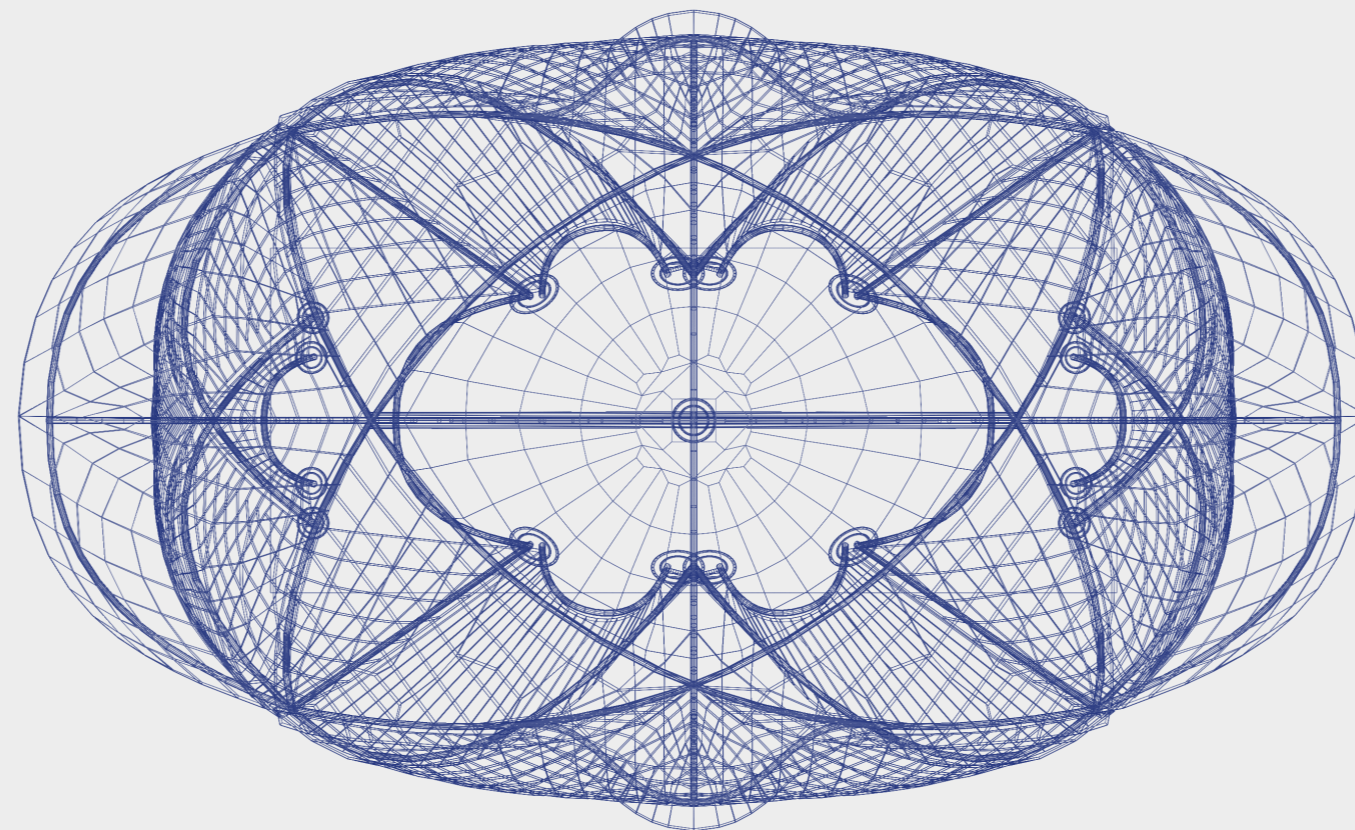


Permaculture Farm

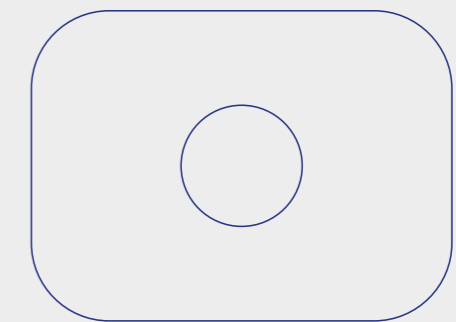
A small fenced permaculture organic farm consists of local vegetables that do not have the possibility of disturbing the local ecosystem to provide for basic food needs for campers.



Main Infrastructure



ABUNDACULTURE (2019) Composting toilet, YouTube. Available at: <https://www.youtube.com/watch?v=lqbYohdTGzo&t=368s> (Accessed: 15 March 2024).



Compost Chamber

A compost chamber made from bricks, where the buckets from the compost toilet can be brought here to be composted to use for farming and possible energy use.

Camping Ground

A plain grass ground is located around the main structure, where a camper can set up tents and other outdoor activities.

Process of CampBoo

Launching

CampBoo will be funded by local government and individual or organisational sponsors. All materials will be sourced consciously from local, responsible sources. Local workers and possible volunteers will lead construction. All processes shall be documented and published online for public supervision.

Planning

Using the SADI method (Survey, Analysis, Design, Implementation and maintenance) derived from Landscape Architecture, CampBoo will undergo a year-long cycle of observation of the needs of the land and the construction. There will be mapping with architects and discussions with local botanists, biologists, native dwellers, or representatives who live near the mountain to gather necessary information. The next step will be to make the final design and plan to create a resilient and regenerative system according to that information.

Construction

The construction of Campboo will ideally take place within 3~4 weeks. All processes will be documented and published.



Maintenance

Site maintenance will need to be done collectively by every camper, alongside a paid maintenance person who will be on-site full-time (ideally a local person). Guidelines will be set up for the campers to follow, for example, to make sure all campers are educated on the "Leave No Trace" principles:

1. Plan Ahead & Prepare
2. Be Considerate of Others
3. Respect Farm Animals and Wildlife
4. Travel and Camp on Durable Ground
5. Leave What You Find
6. Dispose of Waste Properly
7. Minimise the Effects of Fire

Campers will be required to maintain the infrastructure and be responsible for taking out the compost before they leave as well.

Regeneration

Education will also be an essential part of CampBoo. Besides camping, there will be a series of workshops run by experts, educators, professionals and volunteers about regenerative design, permaculture, bamboo materials, cooking local culture, etc.



Online System

There will be an official website and another social platform for CampBoo to announce workshops, contact campers, take suggestions, and conduct surveys. A logo was developed for CampBoo by co-designer Eikou Zhang.

