Design_Production_Allen_Yibo_Peng.pdf

Design_Production_Project_Proposal

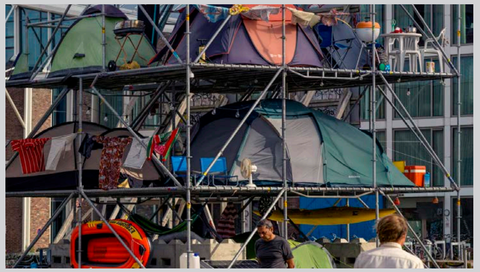
Design_Production_Research_&_Process

Design_Production_Project_Outcome

Design_Production_Research_&_Process

Research_&_Process
Starting Point

After choosing the brief, I quickly decided that I wanted to do something about camping because I am passionated about it. I started doing research about alternative possibilities about camping done by different artists and people. For example the Highrise campsite by Willem de Hahn, which consist of a scaffolding made vertical campsite. I also found other similar concept with scaffolding structures done by other people and the famous bamboo scaffolding in Hong Kong, which all inspire me to use think about this structure more for later designs.





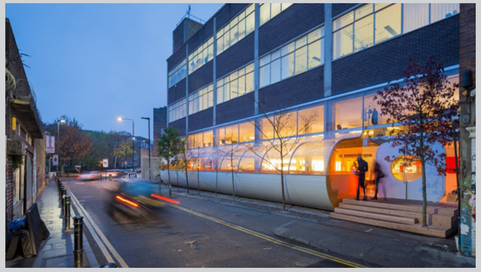



Willem de Haan (2023). Highrise Campsite: Nature City.


Fattinger Orso (2005). ADD ON. 20 HÖHENMETER.

Kevin Van Braak (2003-2007). Camping Flat

Learn About Architecture

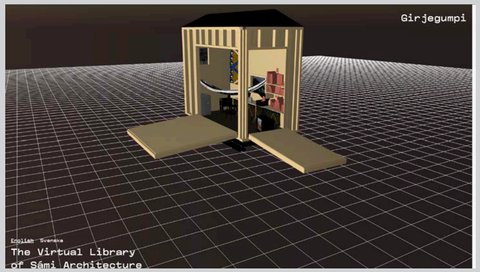


SelgasCano

Since I am not really familiar with architecture as a subject, I wanted to learn more about it. I found this magazine in China called Be Water Journal that talks about architecture, humanity, sustainability and life style from a design point of view. Although all the article in this journal was helpful in giving me ideas and inspiration regarding regenerative design and sustainable future, there were two interviews from two architects that helped me the most. The first one is from a studio called SelgasCano. They have done many regenerative projects throughout the world for the past few decades and is famous for their office buildings that connects local communities and incorporates gardens inside the building. They gave me lots of ideas with the execution of sustainable designs, and how one needs to always think with scientific references but not just solely discard plastic as unsustainable. The second one is architect Joar Nango, who is a native architect from the Sami territory in Norway. His projects are inspired deeply by Sami's nomadic culture and lifestyle. He made housings movable, which inspired me to make a similar one that can be moved and transported easily.

Be Water Journal

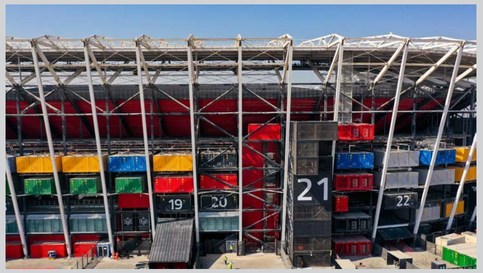
Joar Nango



Material Study

recycled plastic

At the beginning I wanted to start by researching what materials today would be most suitable for my project. I have several points in mind. I hope that the materials will be locally sourced and recyclable, and that the carbon footprint of the entire process from acquisition to construction will be kept as low as possible. So I found these materials as alternatives.



Container

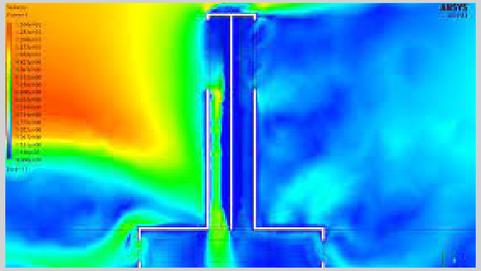
Steel scaffolding

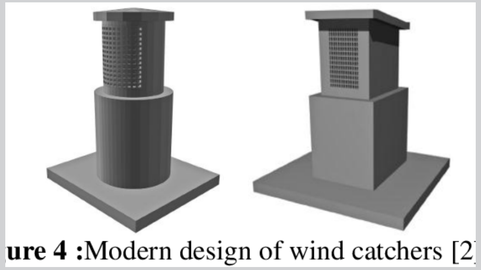
Fireproof Mushrooms

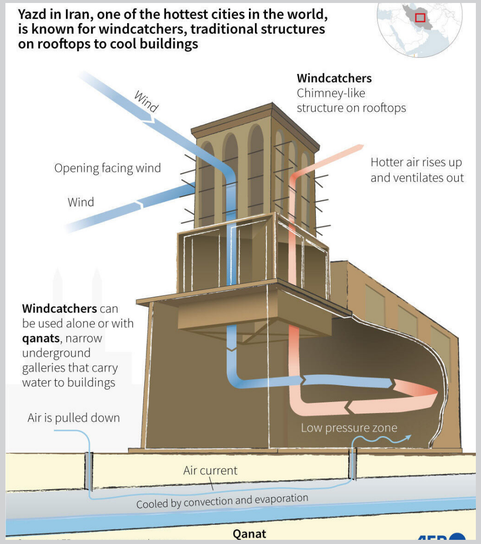
Technique Study

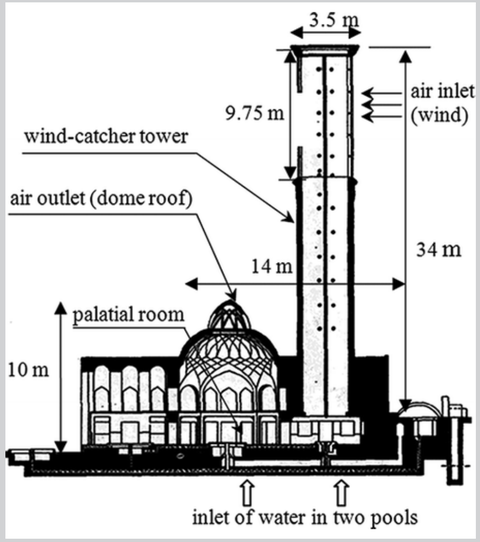
I also studies multiple traditional techniques to make my project more sustainable. Like the Iranian wind catcher system, the Hong Kong bamboo scaffolding system, the Japanese moisture prevention systems using stones and the Quincha earthquake-proof system

Iran Ancient Windcatcher

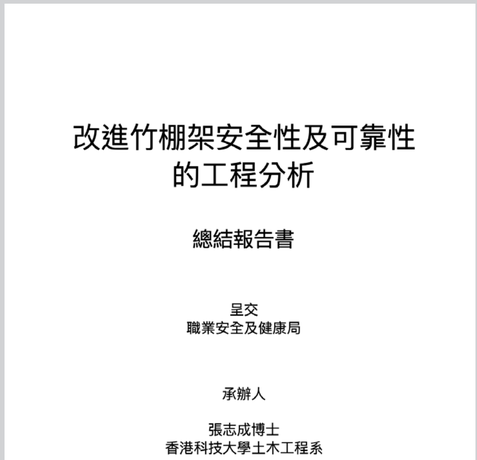




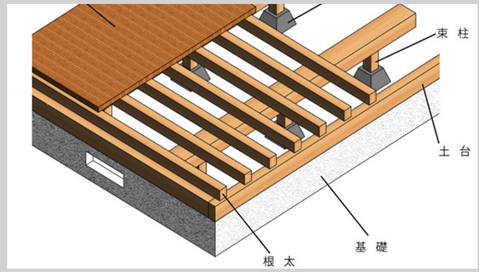




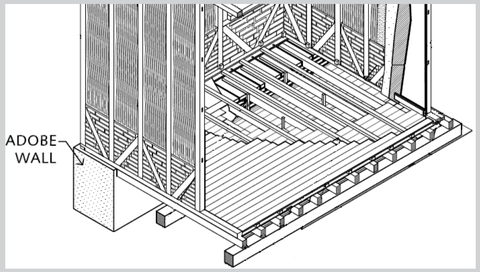
Hong Kong Bamboo Scaffolding Construction Guide



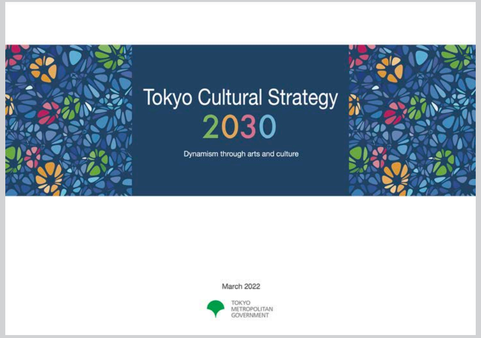
Japanese Building Moisture-proof

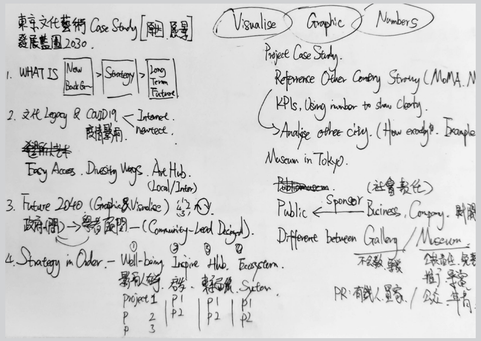


Quincha Earthquake-proof



Proposal Case Study





After completing the first few moodboards and proposal drafts, I found that I lacked experience in making proposals. It just so happened that my favorite Youtuber was explaining and analyzing the Tokyo Government's proposal in great detail, and I learned a lot of key points mentioned in it.

Proposal Case Study

Background

- Sinosphere Country
- Economic downturn
- Unemployment rate rises
- Can't afford a house
- Not to have children (Serious population aging)
- Not getting married
- Tang ping (lie down flat and get over the beatings)

Camping

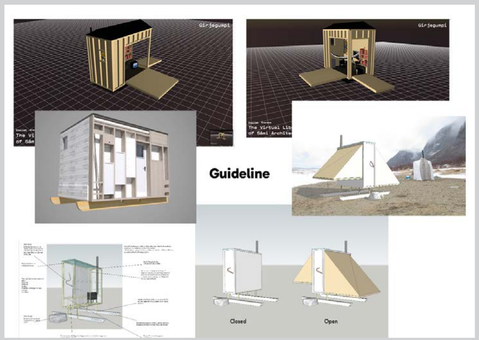
- Cheap
- Affordable
- Coffee
- Cooking
- Breathing
- Back to nature
- Being alive

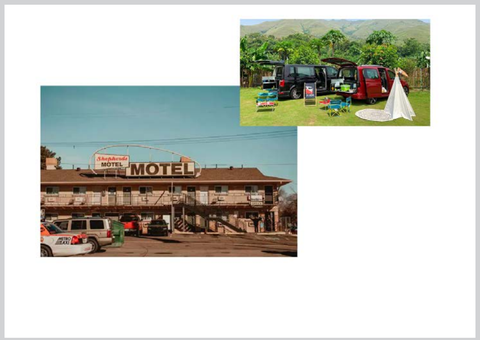
Leave No Trace

- Plan Ahead & Prepare
- Travel & Camp on Durable Surfaces
- Dispose of Waste Properly
- Leave What You Find
- Minimize Campfire Impacts
- Respect Wildlife
- Be Considerate of Others

Camping Issues in Canton/Hong Kong

- Typhoon
- Flood
- Extremely hot in summer
- Heavy moisture
- Wild animals
-
-

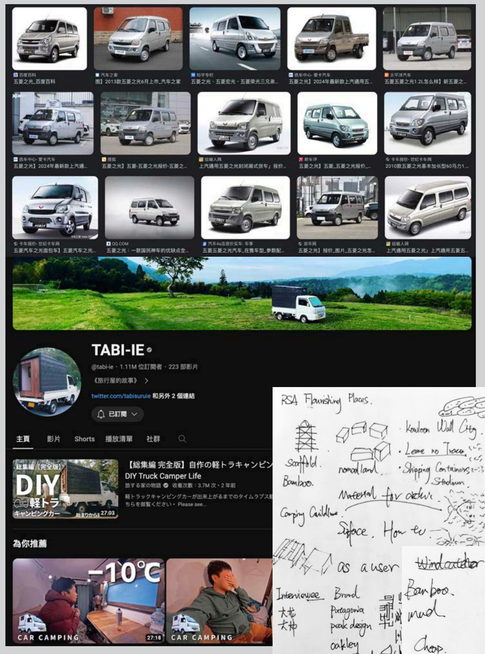


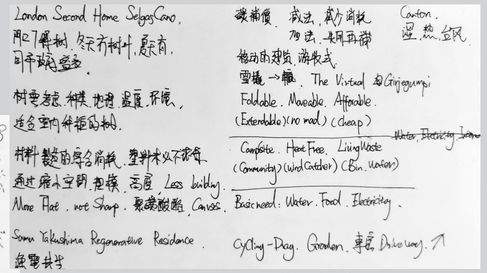


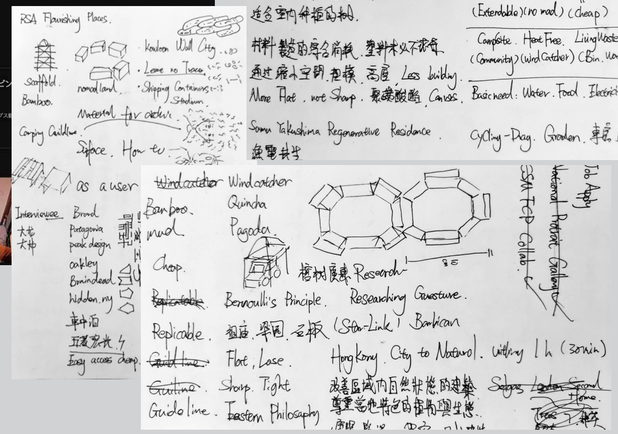
Gesture

- Guideline (PDF, IKEA like)
- Pitch Brief
- Interview Camper Community
- Research regenerative design in depth
- Collaborators
-
-

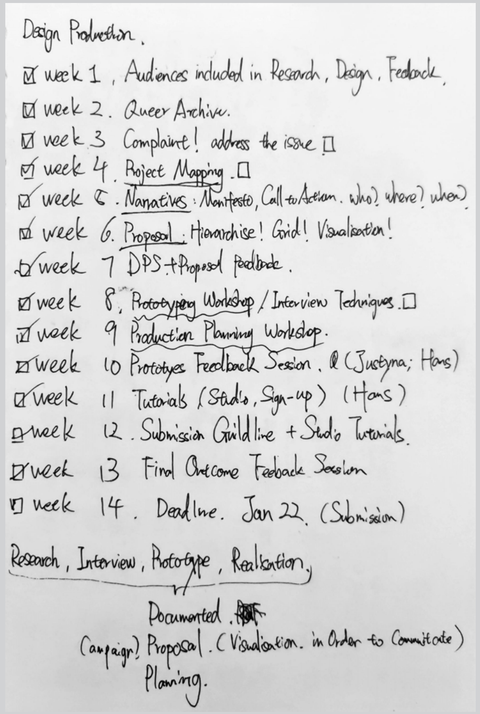
Minivan-dwelling

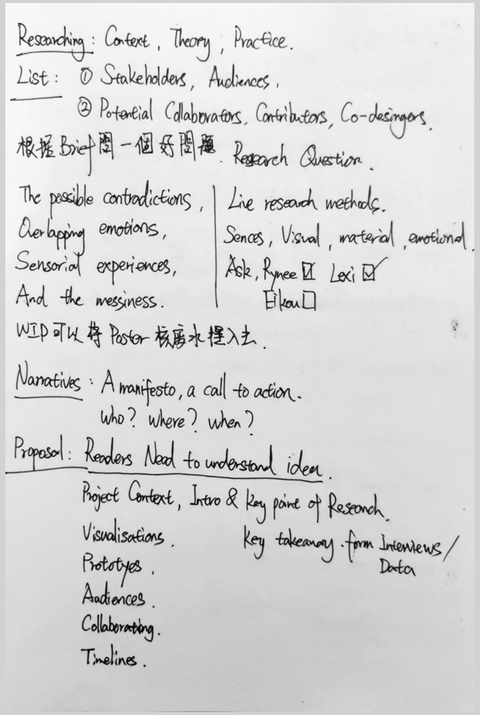




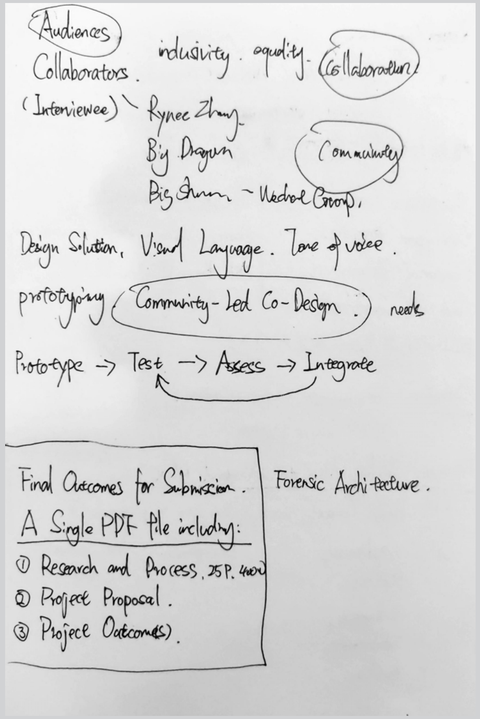


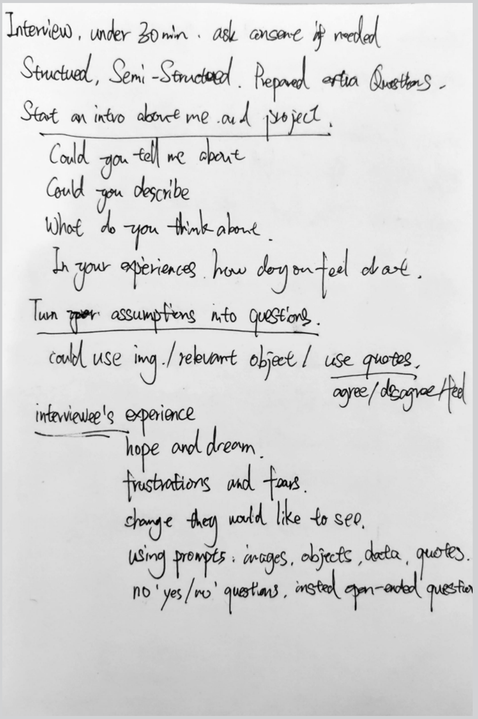
At the beginning, I wanted to develop my project in the direction of movable architecture. I was very interested in Joar Nango's aesthetics and projects. And car camping is also a topic worth studying, but after making many different attempts. I found that this was all just something I subjectively wanted to do, not something my audience wanted. Therefore, many times I find it very difficult to proceed, and it is not in line with the inspiration brought to me by the new knowledge I have learned during this term. I will consider this a good failed attempt, which made me reflect that I should use another way of thinking to design.





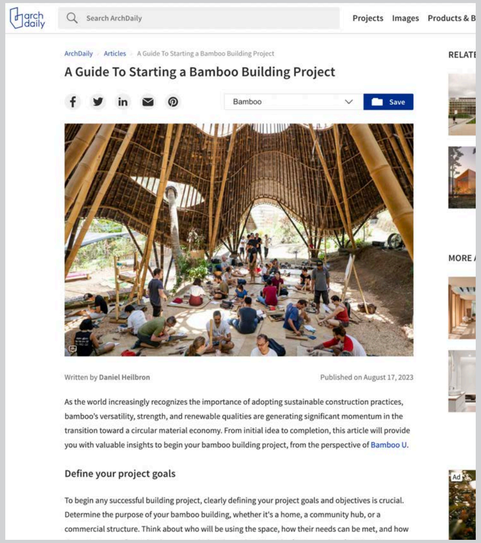
After the failure, I decided to review all the knowledge of this semester. On the one hand, it was because many things that I could not overcome had happened in my life before, which caused my progress to be extremely lagging behind my classmates. On the other hand, I also want to reorganize the new content I learned this semester. After understanding it again, I found that my direction was much clearer, and there were many techniques and methods that should have been used in the project long ago. I deeply regret that I used these techniques so late. For example, what impressed me the most was Community-led design. Although there was not much time left in the subsequent process, I still tried my best to use this newly learned skill to help me complete the project.



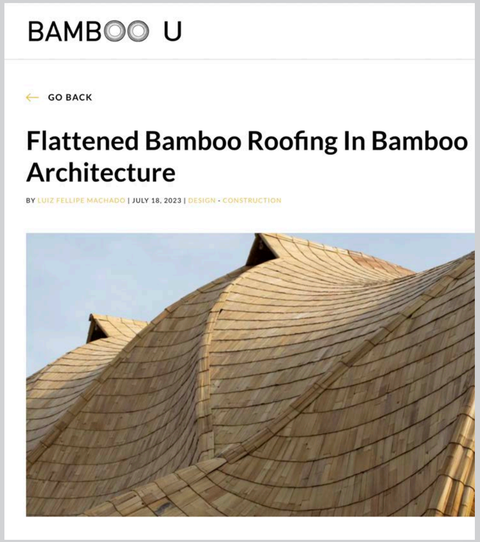


Research with Purpose

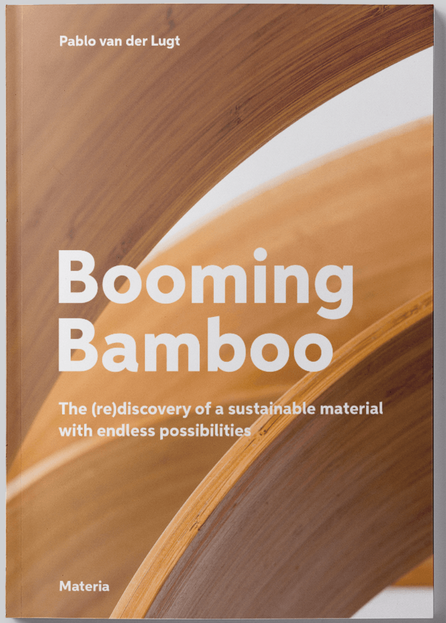
ArchDaily Regenerative design



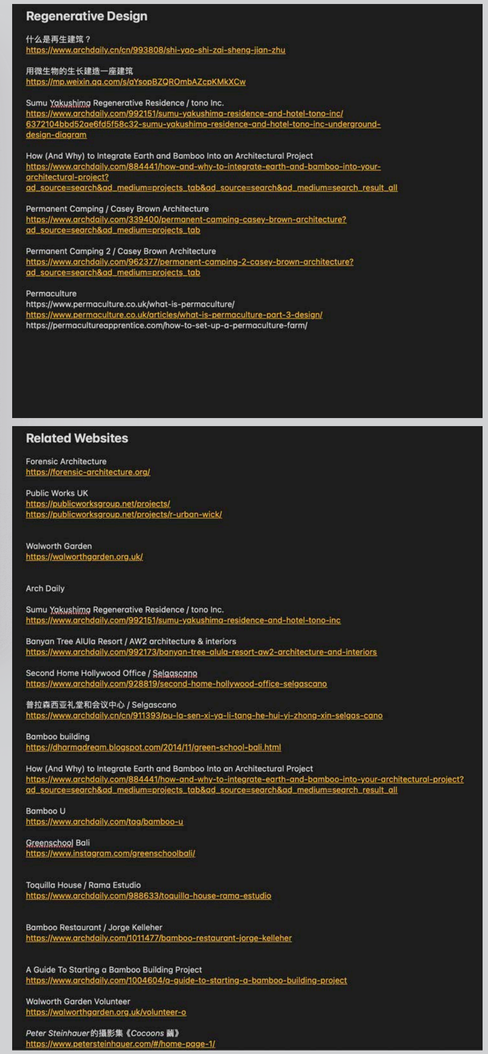
Bamboo U

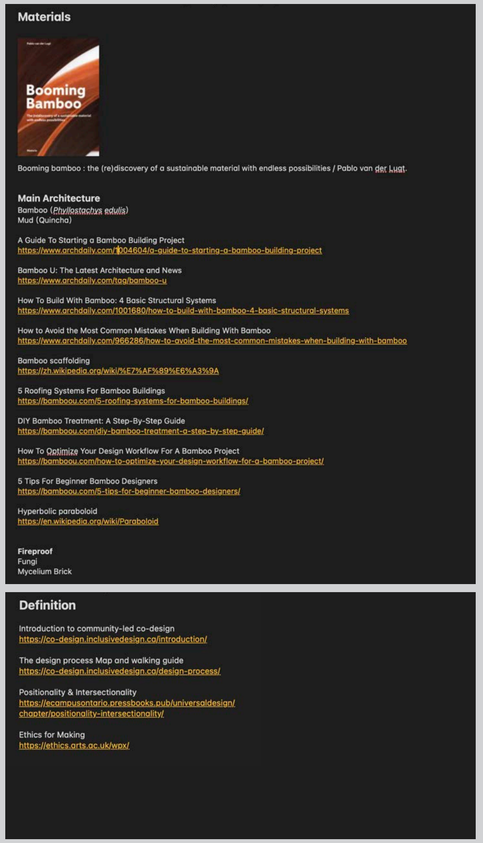


Booming bamboo



Confirm Bamboo as Material

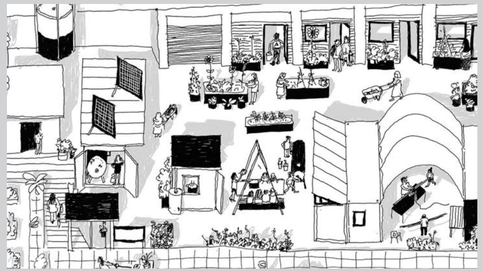




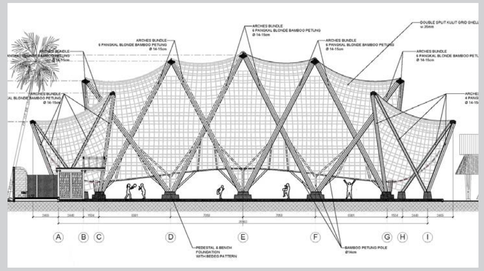
While conducting more research on materials, I found out how bamboo might be such a good choice for my project. I did my research on multiple platform like Archdaily, Bamboo U and a book called Booming Bamboo along with other websites. These extensive research on the materials gave me lots of insights and reasons to use bamboo in my project. They also presents lots of possibilities with bamboo as a regenerative material, and tips when using bamboo in architecture.

Walworth Garden

R-Urban, Public Works

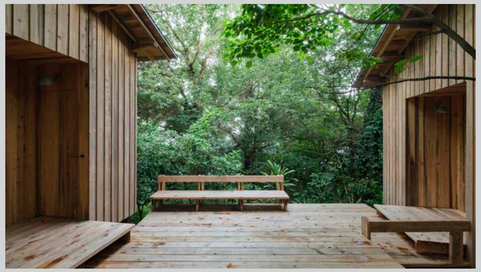


The Arc at Green School Bali



I also conducted first hand and second hand research regarding organic ways of buildings. Like the Walworth Garden trip that we went, and the R-Urban project done by the same artists. These two gave me an idea of how to practically realize my projects with consideration of the local. Other references that I take includes the Arc in Bali, which is a beautiful bamboo pavilion that gave me ideas of the look and structure of my project. The Sumu Yakushima residence which taught me in using smart and natural methods when making a house livable.

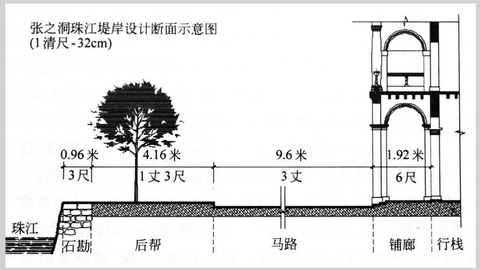
Sumu Yakushima Regenerative Residence



Local solutions

Cantonese Traditional Architecture

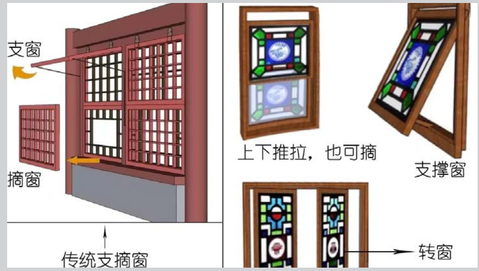
Cantonese Bamboo Tube House

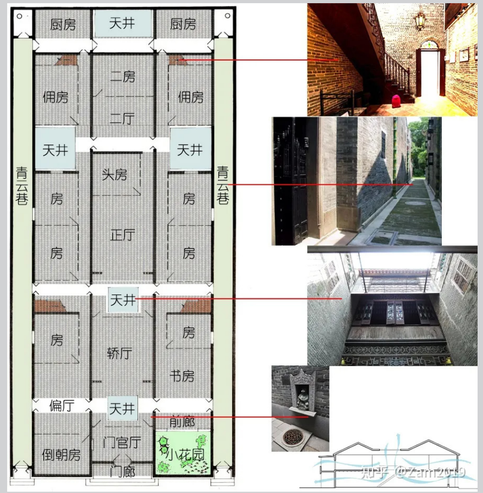


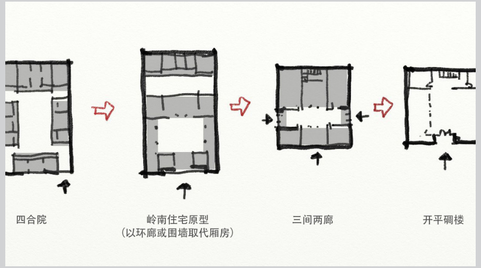
Oyster Shell House

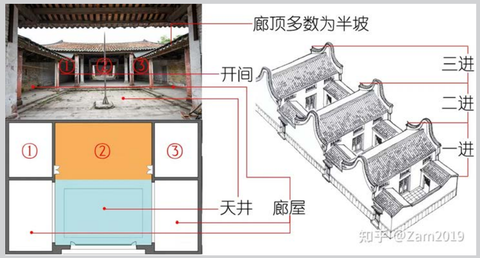
Since I wanted my project to be in an area that I am familiar with, I decided to choose my hometown Canton. I studied about local traditional architectures that targets towards solving local issues like humidity and heat. I also want to utilise my local style in my project as well. I discovered a lot of wisdom from the ancients. It turns out that everything familiar around me has a reason.

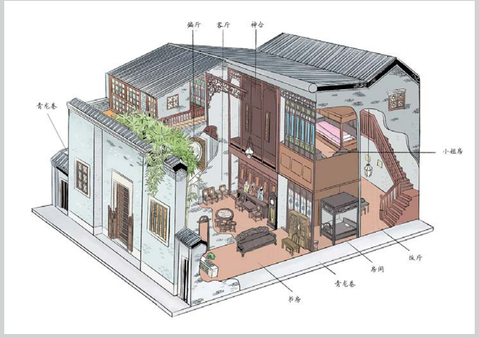
Sai Kwan Mansion Construction











Interview Prepare

Interview, under 30 min. ask ansene if needed
Structued, Semi-Structured. Prepared artia Questions.
Start an intro above me and project.
Could you tell me about
Could you describe
What do you think above.
In your experiences how do you feel about.
Turn ~~your~~ assumptions into questions.
could use img./relevant object/ use quotes.
agree/disagree/feel
interviewee's experience
hope and dream.
frustrations and fears.
change they would like to see.
using prompts: images, objects, data, quotes.
no 'yes/no' questions, insted open-ended questions

To prepare the interviews, I contacted two of my friends who are experienced in camping especially in the Cantonese area. They were both happy to conduct the interview for me. I prepared in-depth questions from local problems, systematic problems from the government and hopes and suggestions for my proposal.

Interview Incatation (Informed consent included)

29 January 2024 at 05:27 — Shared

Interview Invitation

大帅你好！我是大博，不知道您还记不记得我，以前不时会在您的店铺购买装备，还有拍一些徒步露营的相关视频。我现在在伦敦艺术大学读艺术指导。最近在做一个有关再生设计的项目，题目是：我们如何共同重新构想建筑环境的再生未来，以使所有生命蓬勃发展？因为我是一名徒步和露营的爱好者，围绕这个题目我立马想到了露营营地相关的事情。你是我脑子立马想起关于这件事的专业人士，一直都有在看很多您的评测和视频并受益匪浅。不知道我是否有机会邀请您参加一个大约30分钟左右的线上采访，想向您请教一些关于徒步、露营、营地系统相关的话题。(以任何你觉得舒服的形式，微信电话/视频。采访的内容只会用于我的这个个人项目，并且您保有随时撤回任何信息的权利。)

(大帅)

大帅你好！我是大博，不知道您还记不记得我，以前不时会在您的店铺购买装备，还有分享一些徒步露营的相关视频。目前我在伦敦艺术大学攻读艺术指导，正在进行一个关于再生设计的项目，题为："我们如何共同重新构想建筑环境的再生未来，以使所有生命蓬勃发展？"由于我太喜欢徒步和露营了，立刻想到了与露营营地相关的内容。

您一直以来都是我心中在这个领域的专业人士，我经常关注您的评测和视频，受益匪浅🙇。不知道我是否有幸邀请您参与一个约30分钟左右的线上采访，想向您请教一些关于徒步、露营、营地系统等方面的问题。采访形式可以是微信电话/视频或者打字聊天，任何您感到舒适的方式都可以。(轻松愉快的，不要有任何压力，只有我和你一对一聊天而已🤓)

请放心，采访的内容将仅用于我这个项目，并且您随时都可以撤回提供的任何信息。如果你愿意的话，我会在项目中提及您的贡献；或者提及您作为联合设计师 (Co-designer)，把正在进行的设计反馈给您以寻求您的专业建议。(轻松愉快的x2，只用给建议就可以，不用做任何事的🤣)

感谢您抽出时间考虑我的请求，希望有机会和您聊天！

(大龙)

Hello 龍哥！好耐冇搵你吹水！我而家喺倫敦藝術大學攻讀緊藝術指導，做緊個有關再生設計嘅 Project，個題目係："我們如何共同重新構想建築環境的再生未來，以使所有生命蓬勃發展？"你知以前喺廣州鍾意同你哋去 Treking, Camping，我即刻諗到同營地相關嘅 Idea

講起呢個 Topic 我第一時間諗起你，帶我入門玩呢個運動又成日麻煩你借裝備俾我🙇。

唔知你最近有冇時間得閒，想邀請你參加一個30分鐘左右嘅 Online Interview，請教你一啲關於徒步、露營、營地系統等方面嘅問題。採訪形式可以用微信電話/視頻或者就咁打字傾計，任何你覺得舒服嘅方式都可以。(好 free，唔好有任何壓力，淨係得我同你一對一吹水🤓)

請放心，採訪嘅內容只會用于我呢個項目，並且你隨時都可以撤回提供過嘅任何信息。如果你願意嘅話，我會喺 Project 入面提及你嘅貢獻；或者提及你作為聯合設計師 (Co-designer)，將進行緊嘅設計反饋俾你尋求你嘅專業建議。(輕鬆愉快嘅，淨係俾建議就得㗎啦，唔使做任何嘢🤣Feel free~)

感謝你花時間考慮我嘅請求，希望有機會同你吹下水！

Interview Questions (Verbally eiterate informed consent)

Intro myself and my project

Hello interviewee, I am Allen Pang and I'm currently a second year design student at UAL. Recently I'm doing a project about regenerative future of the built environment to enable all life to flourish. (More details, 10-30y future)

The interview will last about 30 minutes,

I'm an intermediate hiker and camper. When I hiking in the south china, there is has amazing scenery in different seasons, but there is some poor campsite system and the tourist waste ruined this wonderful experience. Compared to the MacLehose Trail in Hong Kong, they have fenced off a small specific area as a free camp to prevent human activities from affecting local animals. And provide clean water, sinks, shower rooms and toilets. What do you thing about this situation?

Could you tell me about your camping experiences in south china?
Could you describe an Ideal campsite scenario based on your experience.
Changes you like to see by visitor, gov, organisation?
How currently overdeveloped campsite affects the local animal and environment.(ecosystem)

What kind of format camper site are you preferred, free, tent count only, charged.

Leave no trace,
Animals, Plants, Ground,

If you were to build a campsite, on the premise of being eco-friendly, what facilities would you like to provide visitors to facilitate their journey?

26 January 2024 at 16:40 — Shared

Interview Question 大帅

请问你介不介意我打开录音/录像？如果你同意的话，这些纪录只会用在这一个获得您授权的项目，以您作为共同设计者的前提下使用。如果不同意的话也完全没有关系，我会使用打字活着写字记录下来。

请问你介不介意我询问一些必要的基本信息。这些纪录只会在这一个获得您授权的项目，以您作为共同设计者的前提下使用。如果不同意的话也完全没有关系，可以把所有信息匿名活着模糊化处理。

上述的声明就算在取得您的同意之后，无论何时，您保有随时中止我使用这些纪录的权利。

你好 (受访者)，我是 Allen Pang。现在是伦敦艺术大学在读的一名大二学生，专业是艺术指导。最近在做一个有关再生设计的项目，题目是：我们如何共同重新构想建筑环境的再生未来，以使所有生命蓬勃发展？ 因为我是一名徒步和露营的爱好者，围绕这个题目我立马想到了徒步和露营相关的事情。你是我脑子立马想起关于这件事的专业人士，非常感谢你能抽出宝贵的时间接受我的采访！在接下来的30分钟采访，我会问你一些关于徒步、露营、营地系统相关的问题。

请问能告诉我一些你的名字和一些露营、徒步旅行相关的背景吗？

(现在：营地系统)

我主要的徒步旅行的经验集中在中国南方 (广东、江西)。不同线路、不同季节都有令人惊叹的景色，这令我十分享受并且希望持续的进行这项活动。但与这些美丽风景形成对比的是：不理想的露营系统和游客乱丢的垃圾，破坏了这些原本美好的大自然。这不禁令我想到香港的麦理浩径，他们有相对完善的营地系统。政府将一小块特定区域围起来作为自由营地，防止人类活动影响当地动物。并提供干净的水、水槽、淋浴室和厕所，在徒步路线和汽车路线交汇的地方甚至会有洗手间和自动贩卖机提供补给。并且定期会有专门的人员监督一些违规的情况，比如说在沙滩生火是不被允许的，他们发现会先派发传单进行劝导，严重者再罚款。

你知道的中国常见营地的形式有哪些？
牧民 石头屋/木棚没有厕所
避风，不能在山脊，要在山谷
旁边有水源，地面开阔
商业队——房子，跟当地牧民合作
台湾 日本 山小屋

路线经过景区、野线
武功山 (客栈、服务中心) 70/free
2023，10元垃圾清理费，收费卡口
还是很多垃圾，收钱不做事，像门票
(可以这么做：上山领环保袋，下山没垃圾，押金十块钱，真的落实，利益)

国外强制要求垃圾带国家公园

少制造垃圾
果皮

麦理浩径靠近城市
珠峰东坡200/人 (垃圾清理费) 组织牧民用马清理，石头房

您喜欢哪种格形式的露营地，免费/收费？

你感觉在中国南方露营时如何？有没有一些你印象深刻的露营经历？

在露营途中有没有什么你觉得不愉快的事？

(无痕山林运动)

当我接触徒步、露营这些运动之后我开始疯狂的研究户外装备，在买装备之前很喜欢看一些专业人士/发烧友的评测文章或视频

你觉得我们可以做些什么事情令更多人同意并遵守无痕山林的原则？

你觉得目前的露营地有影响当地生态系统吗？比如说豪华露营 (Glamping) 和一些游客营地 (武功山)

我在中国南方露营的时候会受到气候问题的困扰，尤其是在广东的夏天。户外动辄30-40度的高温，要不就台风或倾盆大雨连续不断的下。极度的潮湿加闷热，没有人会想在户外进行任何的活动。我必须非常诚实的说：连我自己也宁愿待在家里吹空调也不愿意出门一步。

请问你有类似面对湿热环境的经验吗？

7-8武功山，尽量避开炎热天气，高海拔1000m -6度
水源丰富，净水器，电解质，泡腾片，宝框里粉。
早起早出发，中午避免徒步，调整时间，
热的时候找遮阳的地方，晚上再走晚点。

以你的经验，你觉得可以通过什么设施或者方法去改善这件事？

(未来：营地系统)

只有民营的，
木房什么都没有，只是仓库，免费
商业队 堆垃圾 并不是很欢迎爱好者
符合在地化的设施

能否根据您的经验描述一个你希望可以成为现实的理想营地？(包括选址)

在环境友好的前提下，您希望在你的理想营地里为游客提供哪些设施、服务或任何东西？

您希望看到政府、组织、访客做出哪些改变？

阶级问题、现实、政府利益
发展成国家公园、
设计不能远离群众

当地的石头，石屋，坑，
林子 蹲位 浇水 植物

我做了一些研究，发现在中国随处可见的竹子是一个建造营地很有潜力的材料。

竹子有以下优势：

吸收二氧化碳生产氧气、本地容易获取、价格低廉、生长速度快、控制收割20-25%不会影响种植规模 (碳中和、甚至负碳排)
机械性能好：柔韧性高、外层硬度高堪比钢脚手架、空心管竹子1.9x 方形木管、重量强度比高于钢管木头。
可以通过简单的工具，弯曲、切割、打扁、热压、编织 etc.

劣势：
由于淀粉含量高有蛀虫或者菌类腐蚀的风险 (可以通过化学处理避免，硼砂溶液)
只能半户外，需要远离阳光、雨水、湿气 (可以通过抬高地面和覆盖全户外处理的竹子解决)

试着想象一个由竹子作为主要建筑材料的非盈利营地，由专业的环保组织接受赞助运营。(政府/个人)
有一个阴凉通风的大厅，并辅以雨水收集过滤系统、太阳能板供电、旱厕堆肥、有机农场、工作坊、AED。
所有设施有一个清晰的指引，聘请专业人士驻场维护、教授无痕山林、竹子和再生设计的知识技能。
只需要尽你所能为营地贡献便可以入住和拿取农场的有机蔬菜水果。(堆肥、施肥，协助维护营地建筑、清洁 etc.)

如果这个营地存在会使你想去造访吗？你会愿意贡献这样的一个营地吗？

你觉得这个营地会有什么可能发生的问题？

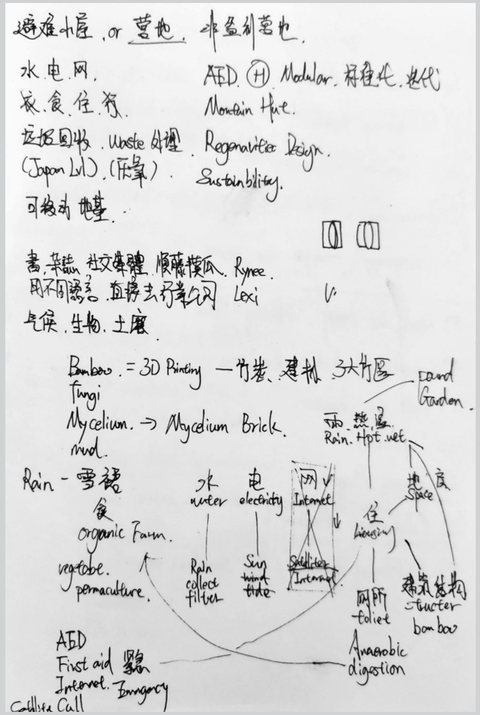
The actual interview process was a little more difficult than I expected. Sometimes the interviewees were not very guided and would talk to themselves. I found that getting people back on the right track is not an easy task and requires a lot of adaptability. But I believe I can do better in the future after I practice more. The whole interview process was very enjoyable, just like chatting with a friend. You just have to be careful not to go off topic.

The actual interview process was a little more difficult than I expected. Sometimes the interviewees were not very guided and would talk to themselves. I found that getting people back on the right track is not an easy task and requires a lot of adaptability. But I believe I can do better in the future after I practice more. The whole interview process was very enjoyable, just like chatting with a friend. You just have to be careful not to go off topic. The opinions they gave were combined with the information I had, and many uncertain issues were successfully solved. I think I have begun to experience some of the benefits of community-led design.

Voice Call Interview

Video Call Interview

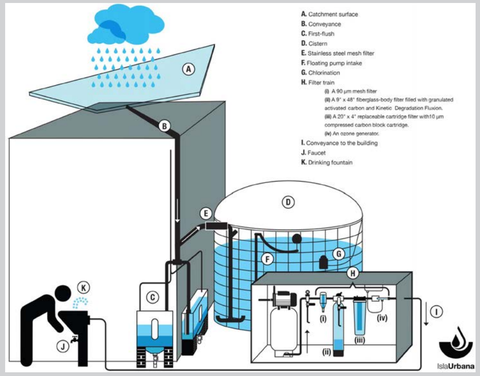
Problems, Solutions

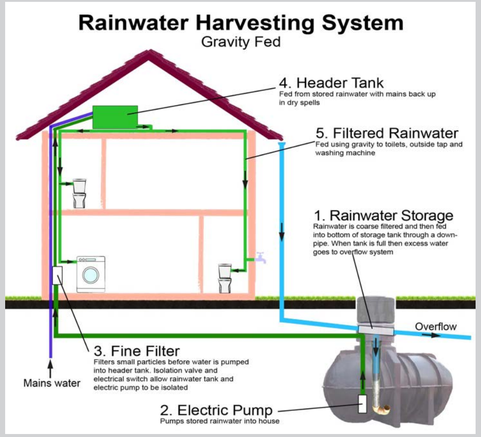


After the interviews, I concluded some possible problems and challenges from their perspectives and found out some solution for it. Like solar panels for electricity, rain water harvesting system fro the water and safety issues that can be eased with the installation of AED.

How to cope with subtropical climates?

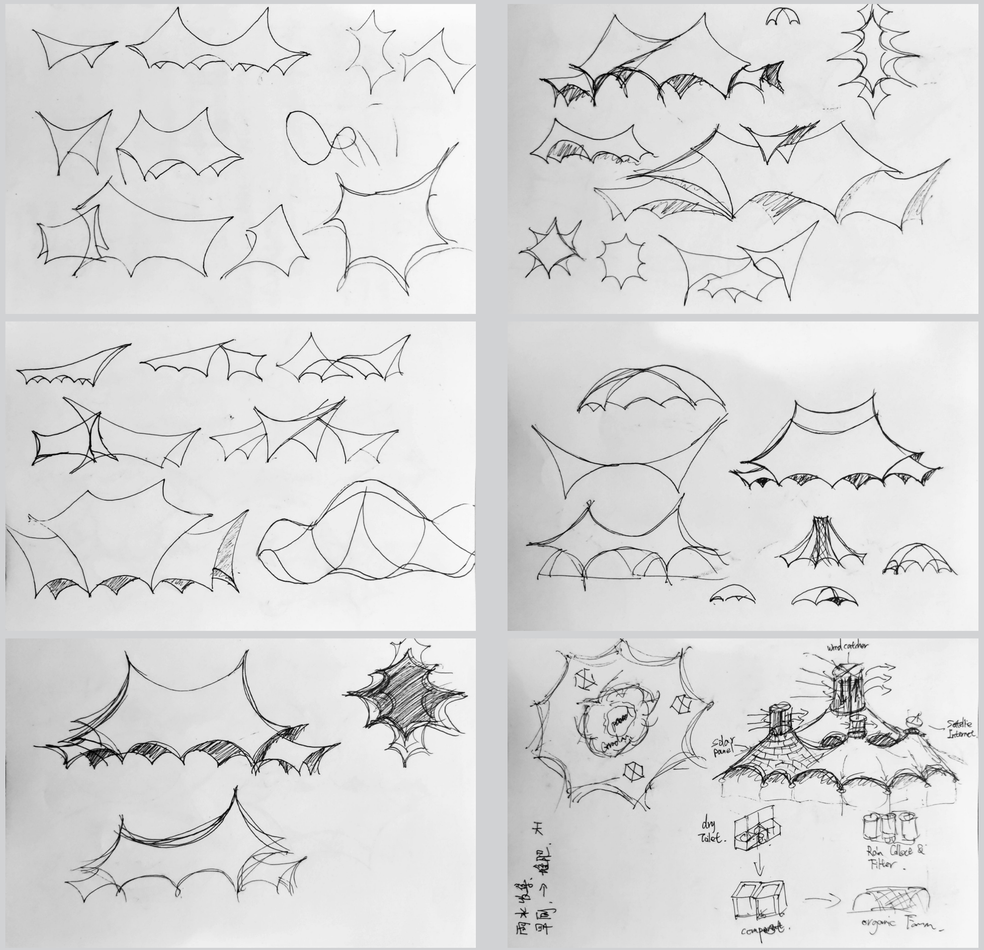
How to replenish water resources?





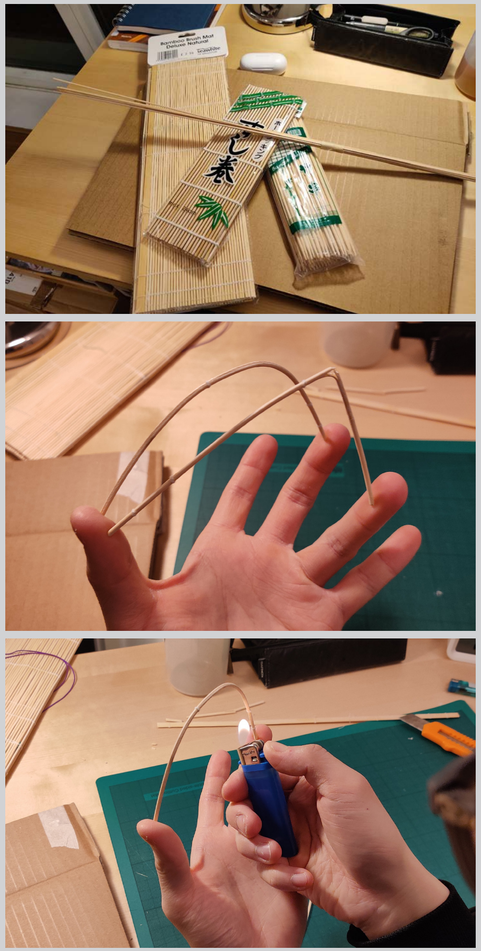
Is it possible not to use a wet toilet?

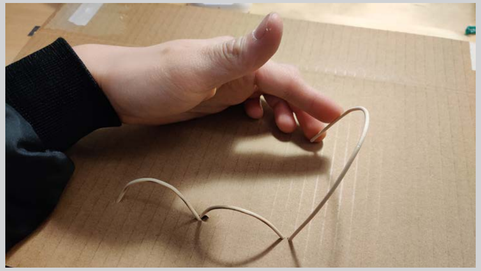
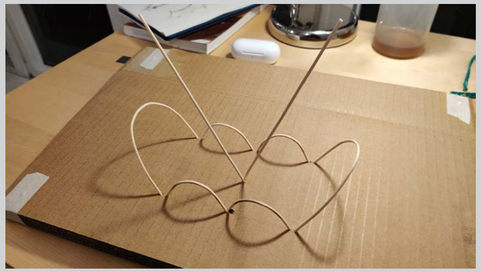
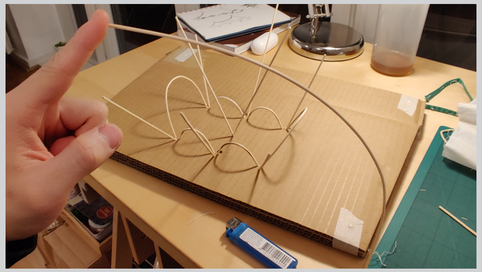
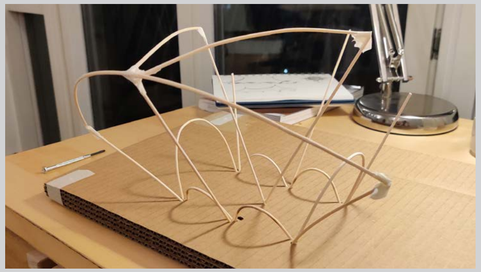
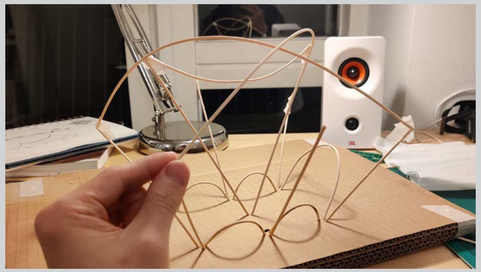
Architecture Draft

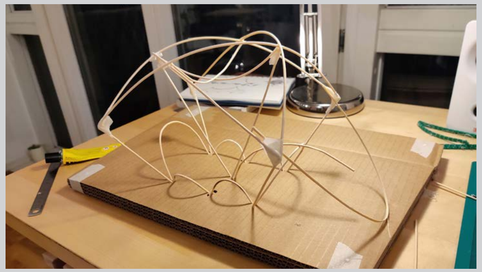


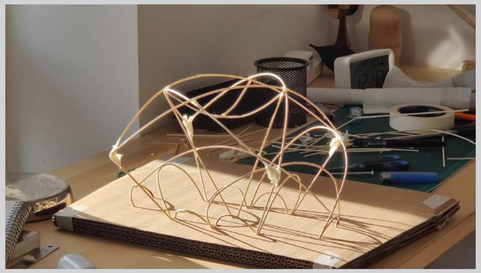
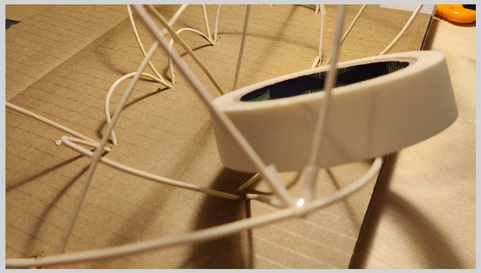
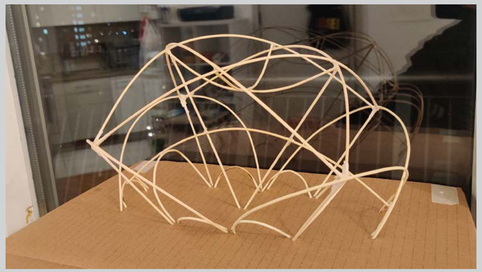
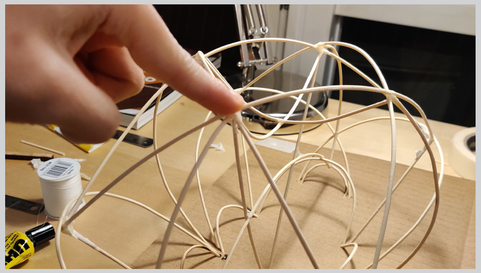
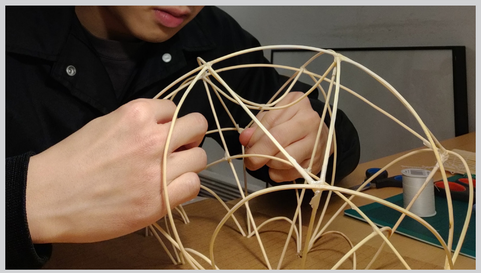
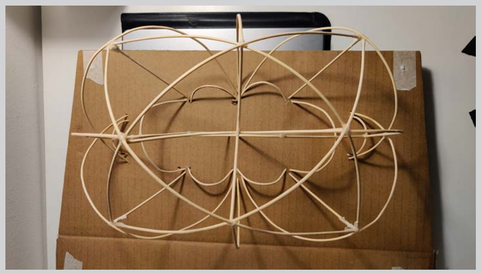
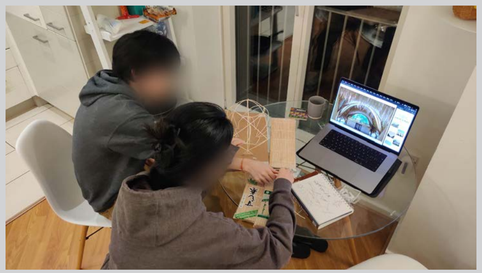
For the prototype, I started to draw on paper first of the shape of the building. I then used small bamboo skewers from the shop to build a little model in real lfe.

Material experiment



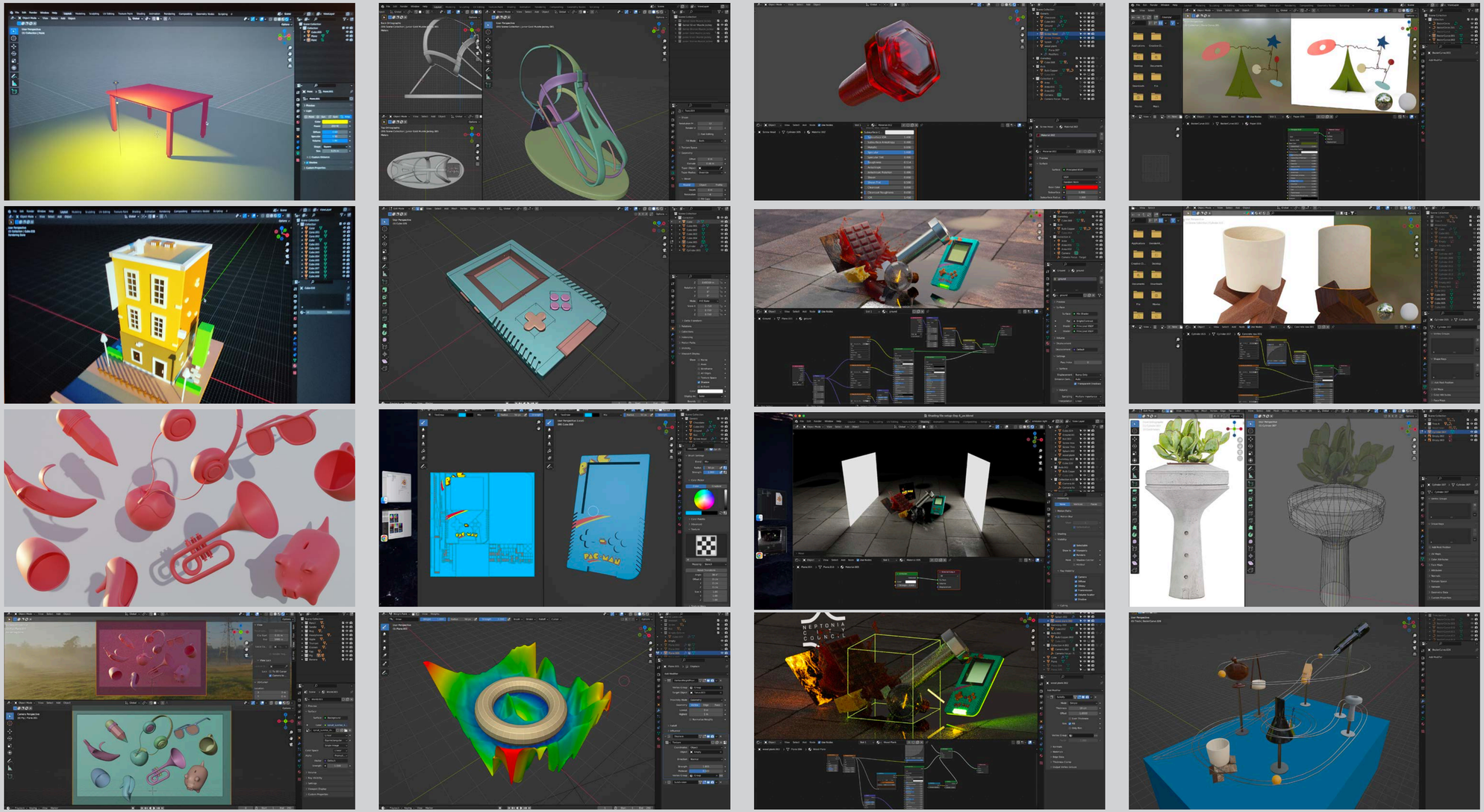



Before getting into computer modeling, I felt that I was hardly modeling in blender without a actual model as a reference. because I would have to design a lot of realistic physical laws. After having this prototype, my subsequent modeling process went very smoothly.

Is it really reasonable to be able to directly touch some designs? Does it comply with real physical rules? It also allows people around me to actually touch and give corresponding opinions. This is also a new skill I learned when I see other architects working on architectural projects.

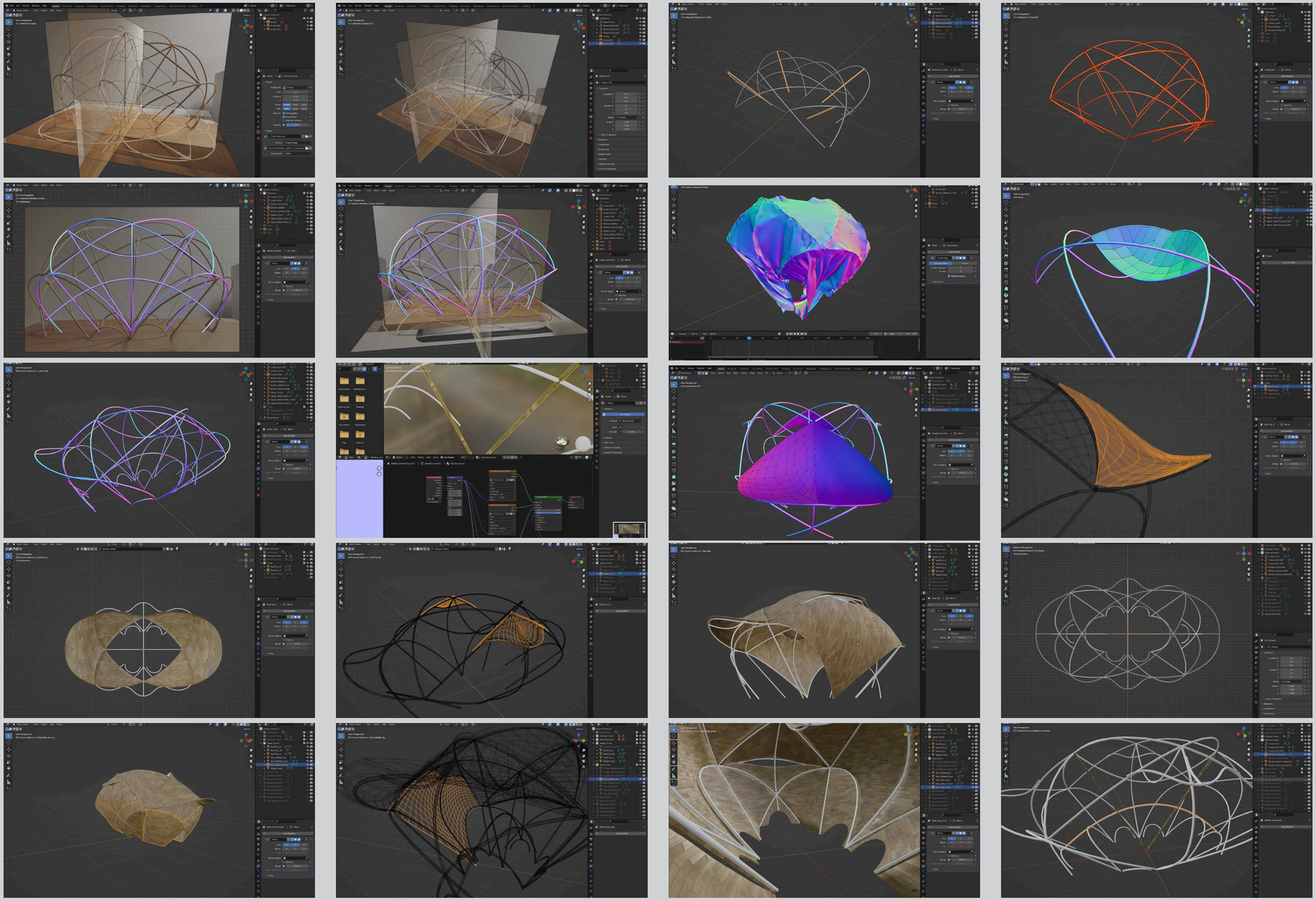
Learn Blender from Zero



I only made up my mind to study Blender seriously at the beginning of this term. After studying for a long time, I felt that I really like processing geometric three-dimensional figures. So eager to learn more, I invested in an external keyboard and asked James for recommendations on A-list free away-from-home lessons on YouTube. Although the process was long and painful, looking back now, it was all worth it. I think I should continue to learn more knowledge in the 3D direction.

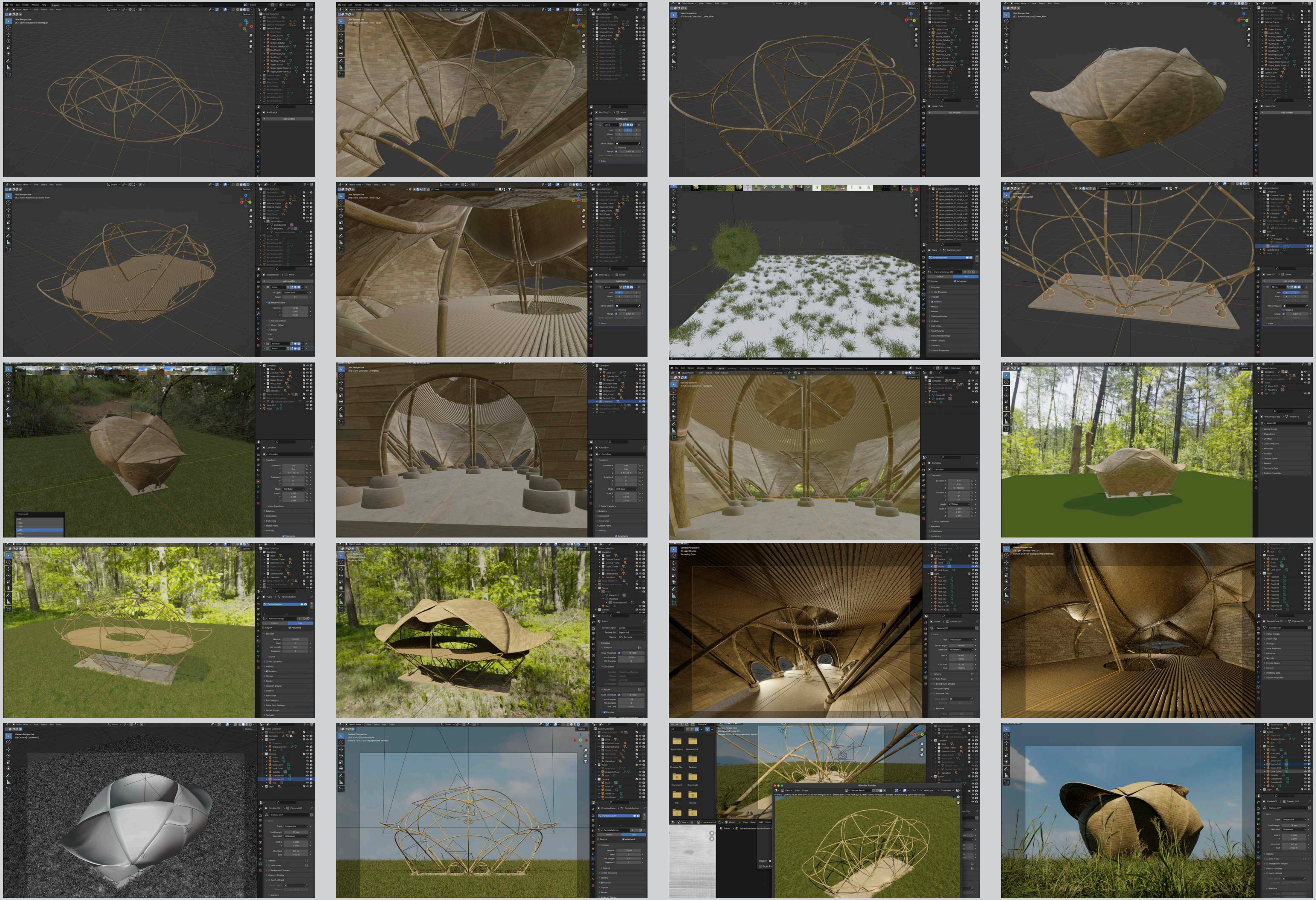
3D Modeling

I encountered many, many problems during the modeling process. Some of them can be solved online, while some are unsolvable bugs, which really makes me frustrated. But fortunately, everything can be solved through various means in the end, and a result that is quite satisfactory to me is achieved. But at the same time, I also know very well that I am just getting started.

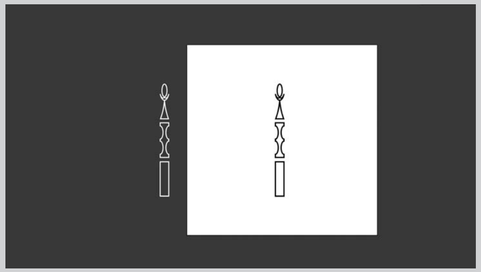


Research_&_Process

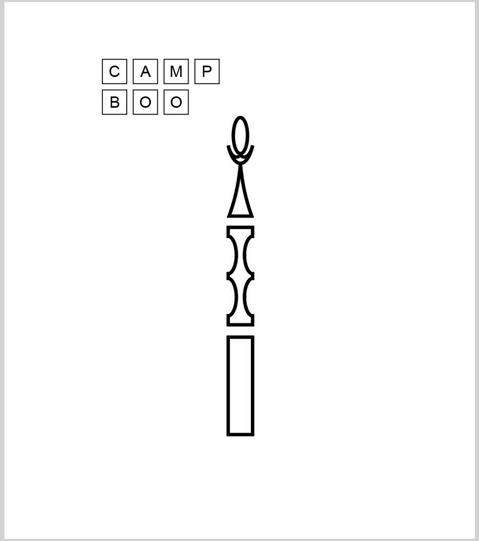
3D Modeling

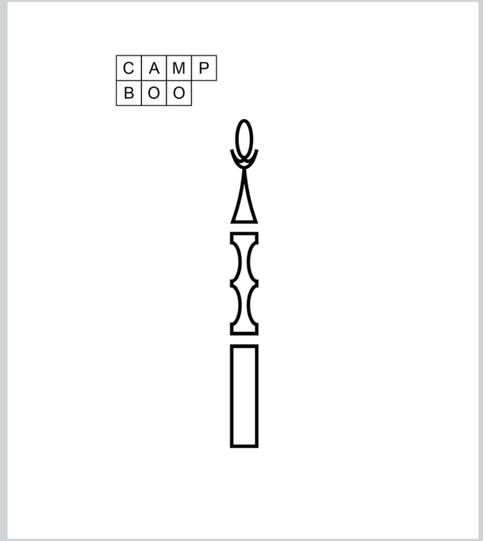


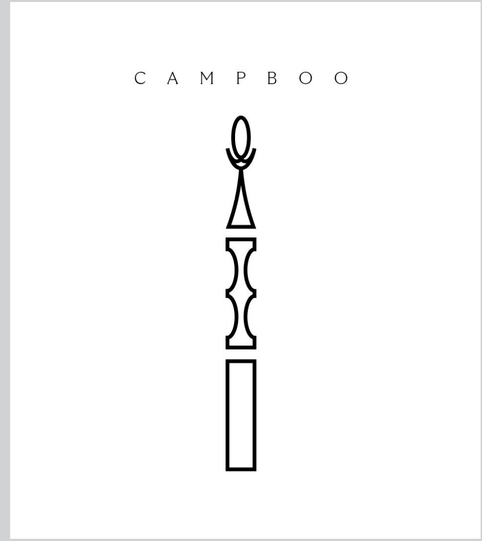
This logo was commissioned by me and designed by Eikou Zhang. He believes that bamboo plus camping is very consistent with a traditional Chinese philosophical thought: the unity of nature and man. In Chinese philosophy, great emphasis is placed on the right time, right place, and right people. It covers everything on the road to success. The right time is the talent and opportunities on the road to success; the right location is the environment and conditions on the road to success; and the people and people are the comprehensive strength (the key to success) on the road to success. When all three conditions are met, we can camp happily.

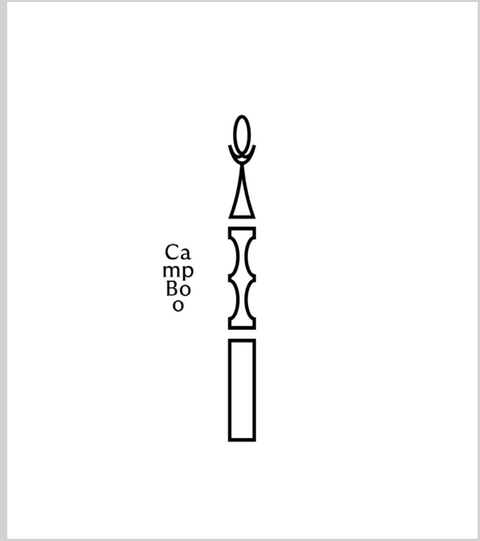




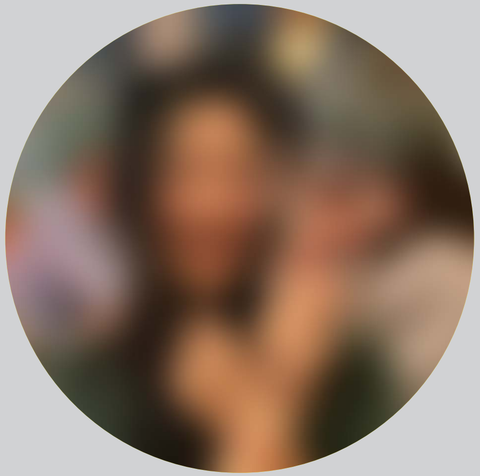












Rynee Zhang
Co-designer / Advisor

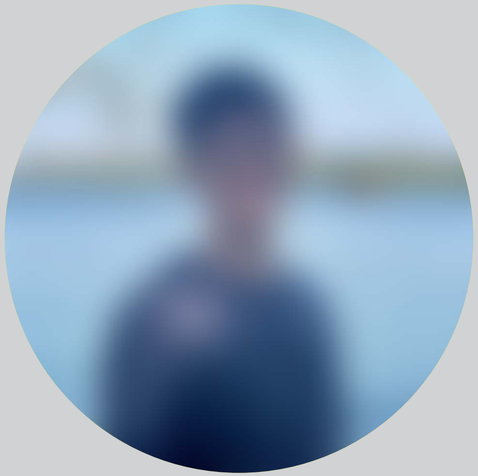
She provided a lot of very constructive opinions on this project, especially in the construction field and gave me very crucial help. Continuously worked with me on difficult issues throughout the project.

Eikou Zhang
Logo Designer

In my mind, Eikou Zhang is a graphic designer with great vision. He is good at Japanese-style graphic design. I wanted CampBoo's logo to have a sense of the oriental world and bamboo, so I commissioned him to design a logo for CampBoo.

Da shuai
Co-designer

An expert with 14 years of hiking and camping experience, he has traveled to almost all difficult hiking routes in China. His main business is selling hiking and camping equipment through an online store. Usually, we will continue to update articles and videos, evaluate equipment, promote environmentally friendly camping, popularize attempts, etc.



Yilong Peng
Co-designer

Former Decathlon Hiking, Camping Department Manager, with 4-5 years of experience in mountaineering and camping. Participated in professional outdoor training and obtained corresponding qualifications. He has an unusual passion for these sports and is very good at every move in the domestic outdoor market.

Reflection

During the time of this unit, I have gained so many knowledge from researching, planning and realising the proposal. I want to reflect on what I have learnt, what I did well, and what might be improved in the future in the following writings.

I want to start from how I have been doing intensive and thorough research on the subject matter. Besides the knowledge and insights gained from all those research materials about architecture and regenerative design methods, I also learnt new ways of conducting research. It has always been hard for me to d thorough research because I did not know where to start, and sometimes I felt trapped in my own thoughts and ways. This time, I reached out for the help of friends and tutors, to get advice for where to do research. Their suggestions really helped me to expand my research methods. Before, I had only been researching online generally or getting books from the school library, this time I had used more magazines, journals and specific professional websites to conduct my research instead of just googling and using the internal library. From these intensive research, I was able to back up my design with reasons and logics, which actually helped me speed up the entire process of the final design. Although, I do think that I might have spent too much time doing the research, which left me less time to experiment and prototype. In the future, I want to make better timetable in order to divide my time for each part of the process more consciously. My ADHA and other needs to care for other units like PPU also worsen this situation, which I also need to be more aware about in future projects. Alongside the research process, I also spent a lot of time and energy learning Blender. Because I wanted to learn the software thoroughly, I spent many days just to study from the basics even though I had already know how to use the software. Although it also took up many time, I do think its essential for this time and the future. I also improved a lot on collaborating and co-designing in this unit. I openly seeked for help and collaboration from other people, like my flatmate who is a great graphic designer to help me to design the logo and my other friend who knows more about architecture to assist me in designing the infrastructure.

Generally, I believe I have done a good job this unit by putting in lots of efforts in researching and studying lots of new methods of regenerative designs. I become more drawn to community-led design that benefit all sides, and designs that is more considerate and life-centric instead of human centric. This unit was a great opportunity for me to start to practice more industry standard brief as well to prepare for the future.

Design_Production_Project_Proposal

CampBoo

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

Research Summary

Research Summary

Problem

In Canton China, camping infrastructures are generally underdeveloped. With lack of care by individuals and minimum government funding, there are usually no managing systems for camping sites, let alone shelters that provide basic needs for the campers. This leads to popular camping sites filled with trash that not only damage the local environment and eco system, but also ruins the original goal of camping.

Process

Using personal experiences from the past and interviews with fellow campers and professionals in this field, I found out that there are a lot of improvements that can be made, and collective efforts from local governments, non-profit organisations and individuals will be needed to make them realised. I went through a journey of extensive and rigours research for regenerative design in general, research for locally specification, going to 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 minimise human traces and damage to the environment. The infrastructure will provide basic functionalities and shelter for the campers' needs, while also acts as an educational site to pass down the methods of regenerative thinking.

Location of CampBoo

Location of CampBoo

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

Vegetation

Mainly tropical and subtropical moist broadleaf forests, intermixed with coniferous and deciduous trees small amounts of Máo Zhú (or tortoise-shell bamboo) forests. *(热带亚热带植物学报)*

Climate

Tropical climate. Large amount of rainfall concentrated between the month of April and September. Long summers of humid, hot and rainy weathers. Warm winters with occasional temperature drops. *(廣東年鑑2022)*

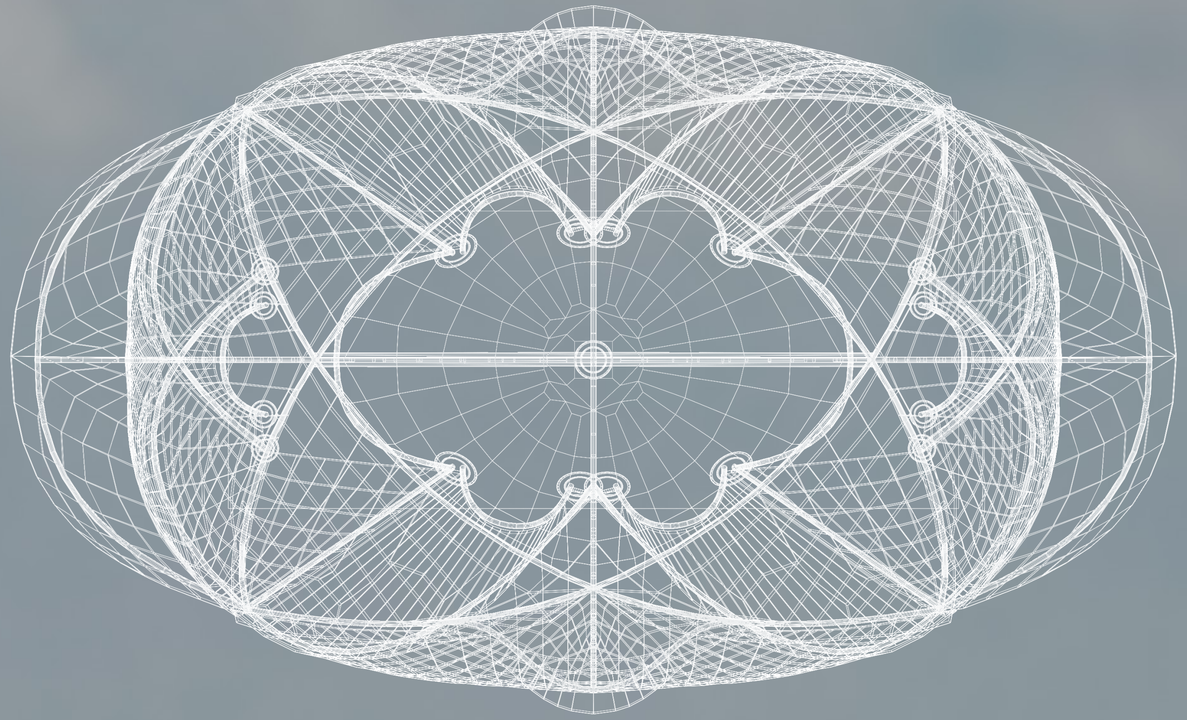
Animals

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. *(Britannica)*

Structure of CampBoo

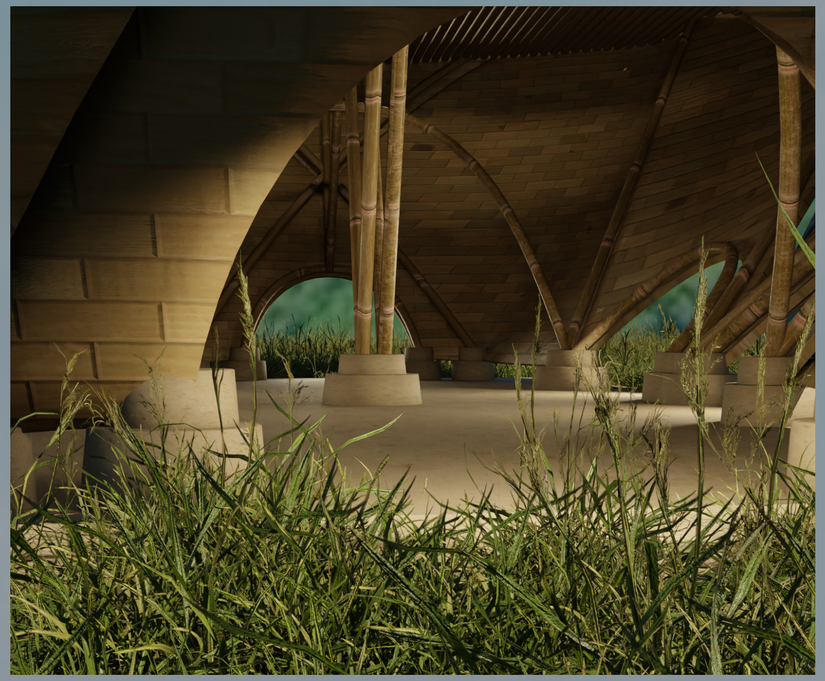
Structure of CampBoo

A main bamboo made infrastructure
A permaculture farm
A compost chamber
A plain camping ground

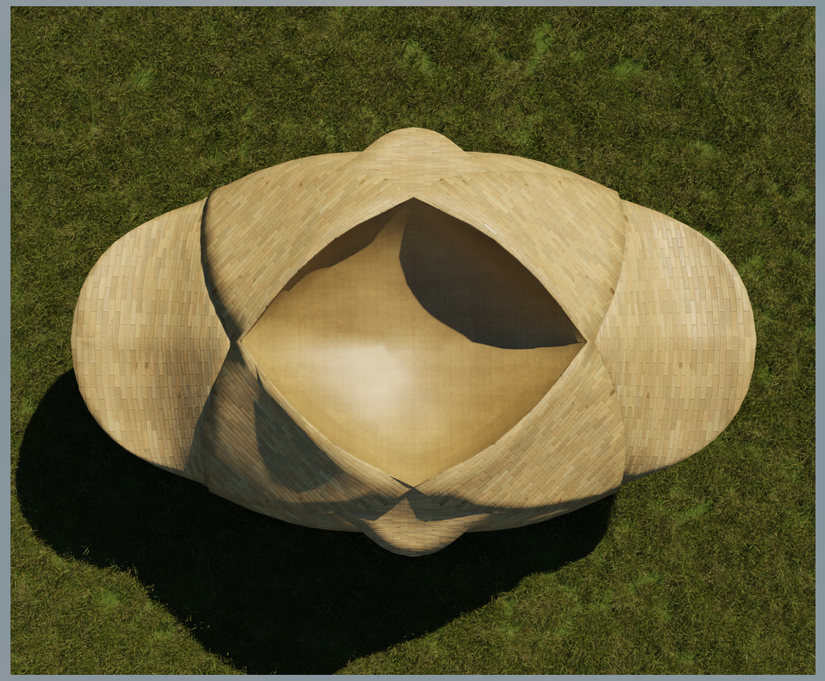


Structure of CampBoo

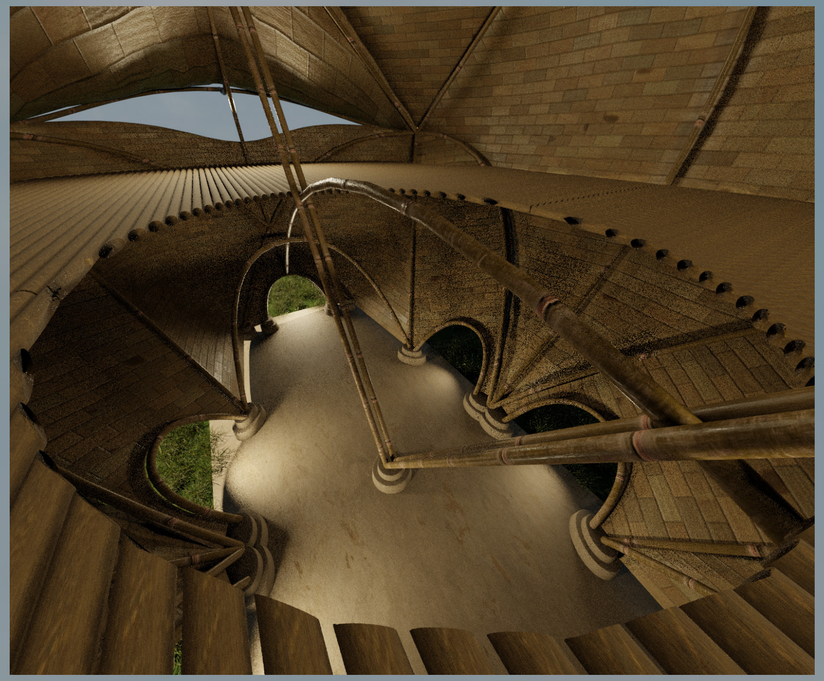
Main Infrastructure



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



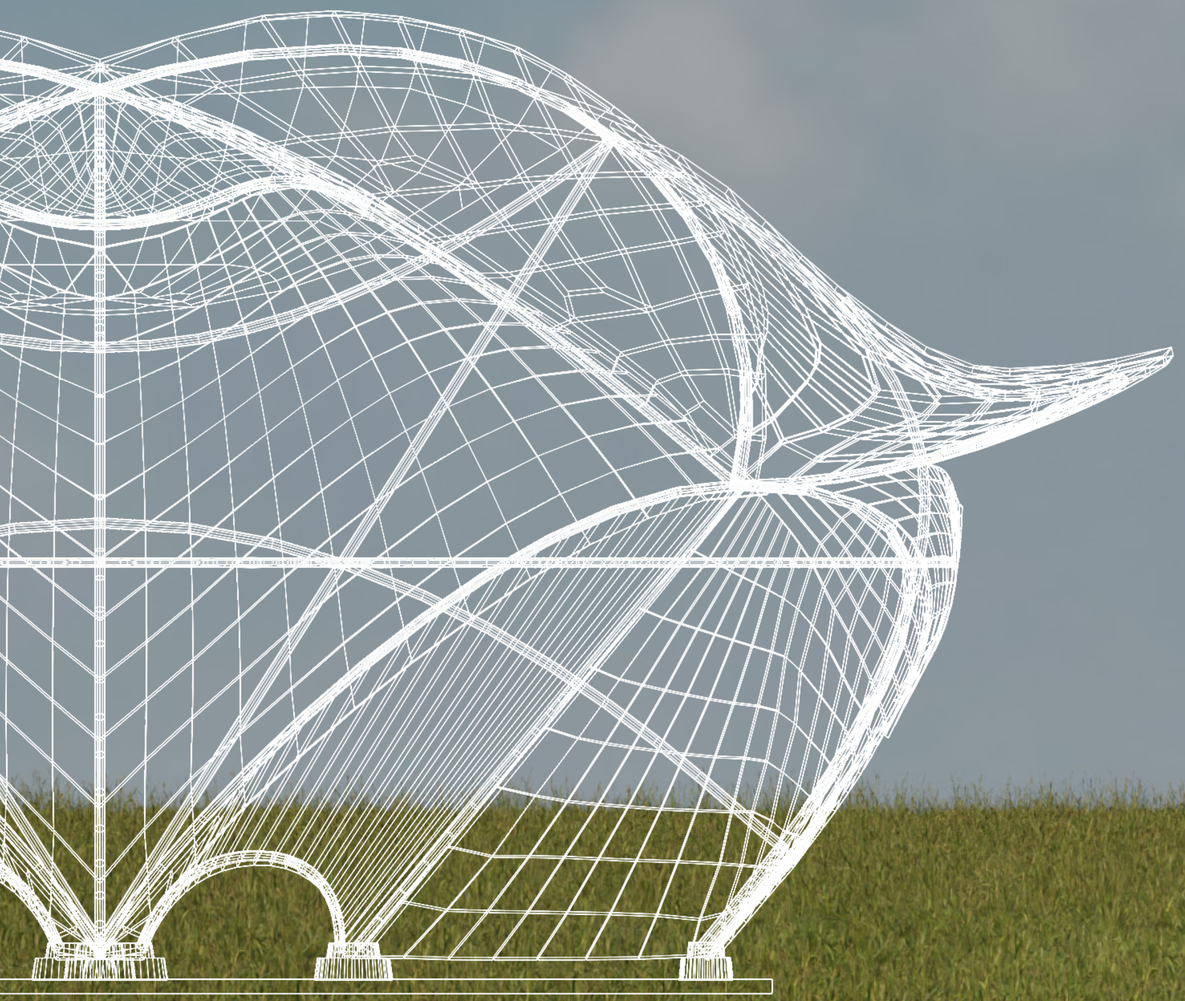
Located the middle of the roof, a rain water collection pot made from steel is connected to a water filtration system underneath to provide drinking water. Opposite two sides of the structure is extended towards the outside and hollow, creating an aerodynamic system to allow wind to come through inside to provide natural ventilation and passive cooling during hot days. On the 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.

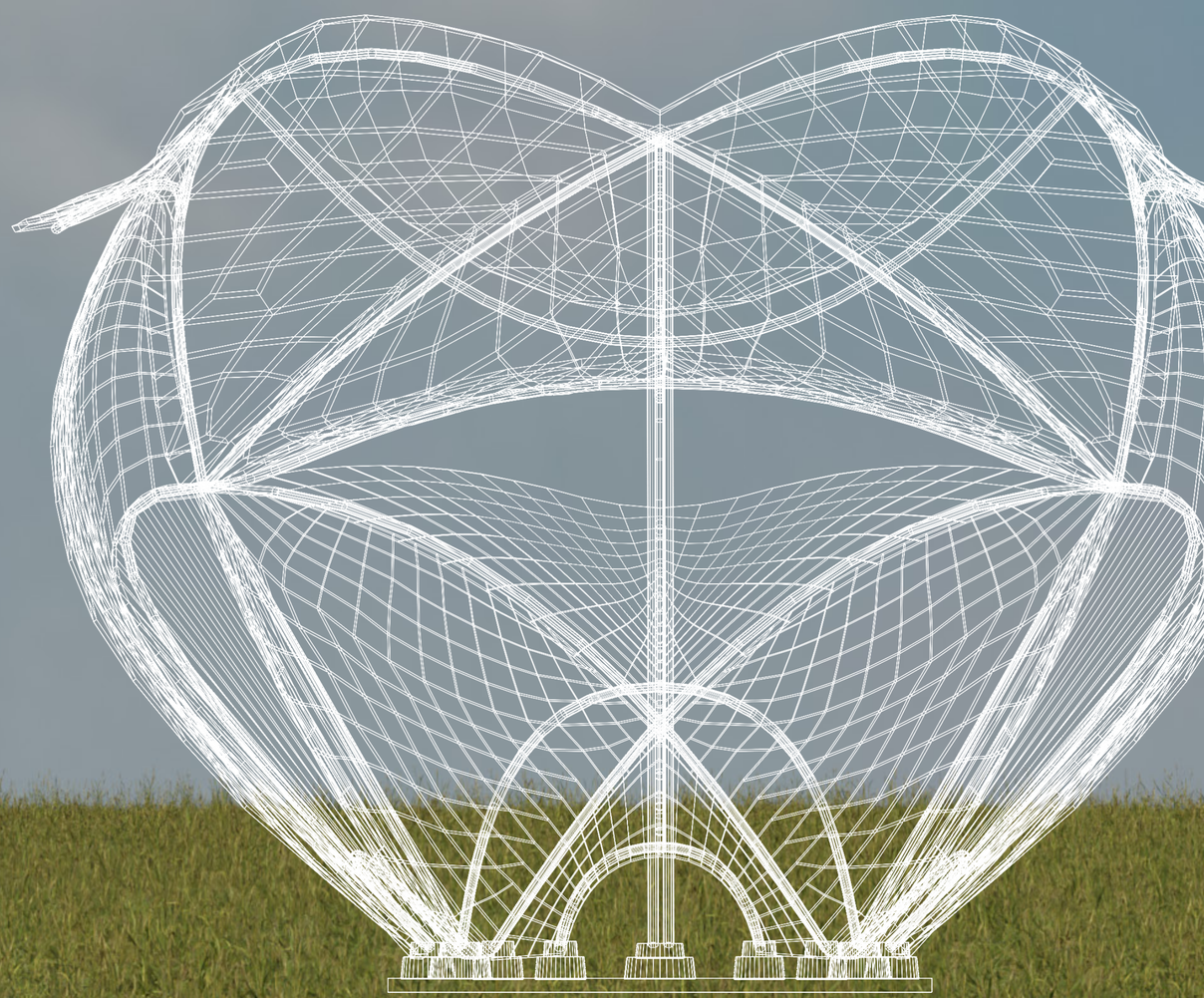


Two floors are connected by ladders. The ground floor is mainly used for communal areas, tents, getting water, toilets. The upper floor have space for the water tank and filtration system, as well as small space for tents. Both floors have AED installed.

Structure of CampBoo

Main Infrastructure

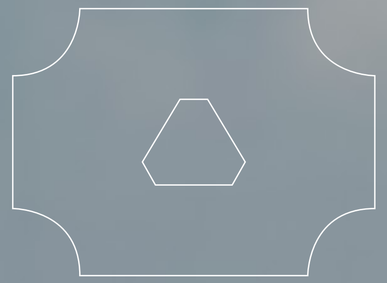




Structure of CampBoo

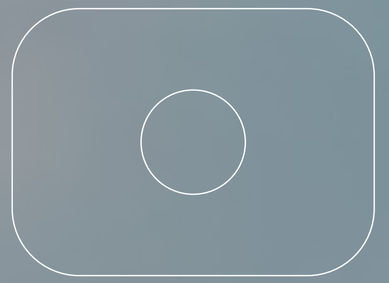
Side Infrastructure

Compost chamber



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

Permaculture Farm



A small fenced permaculture organic farm consists of local vegetables that does not have possibilities of disturbing the local eco system, to provide for basic food needs for campers.

Camping ground

A plain grass ground located around the main structure for camper to set up tents and other outdoor activities.

Materials

Materials

Bamboo

Bamboo: Used in most of the main infrastructure as a based material. Bamboo is a durable, flexible and regenerative materials used in lots of Asian architectures traditionally due to its fast growing characteristics and strong versatilities. Máo Zhú 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 is suitable for the local climate and weather conditions with proper treatment and insulation methods. It is also cheap in price which lower the budget of the project.

Stones

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

Steel

Steel: To be used only for rooftop rain water collection and storage, as steel prevent water from getting bacterias and harmful slime. The heaviness of the steel is taken into consideration, and proper support will be installed to makes sure it integrate well with the main structure.

Bricks

Bricks: To set up the compost chamber

Process of CampBoo

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. Construction will be led by local workers and possible volunteers. All process shall be documented and published online for public supervision.

Planning

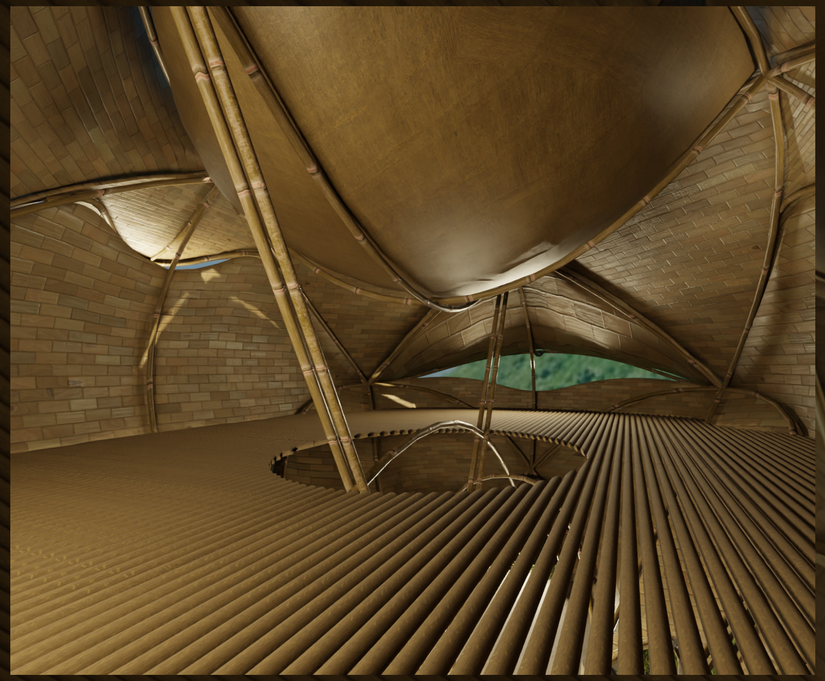
Using the method of SADI (Survey, Analysis, Design, Implementation and Maintain) derived from Landscape Architecture, Campboo will be undergoing a year-long cycle of observation of the needs of the land and the construction. There will be mapping with architects, discussion with local botanists, biologists as well as native dwellers or representative that live near the mountain to gather necessary information. The next step will be making the final design and plan according to those information, to create a resilient and regenerative system.

Construction

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

Process of CampBoo

Maintenance

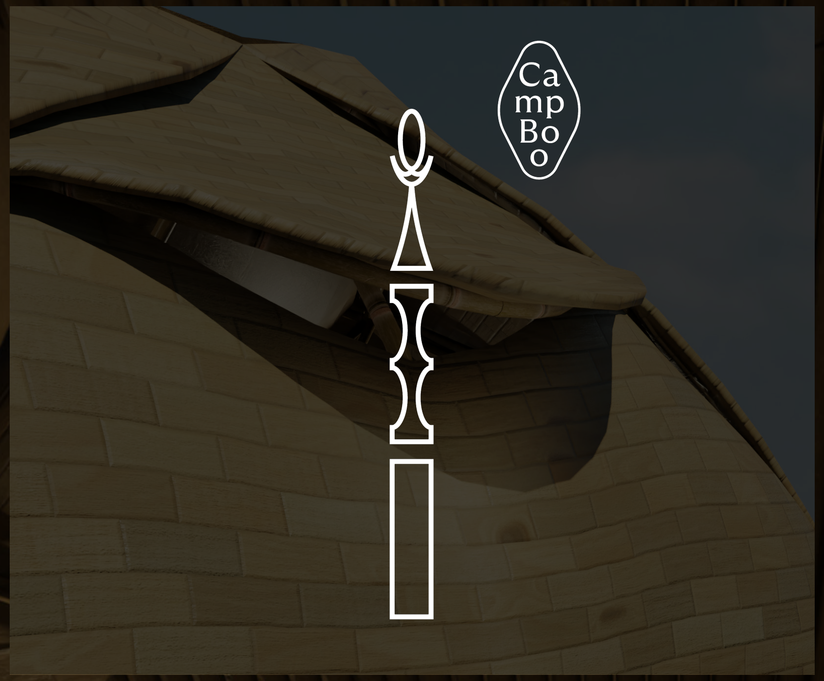


Maintenance of the site will need to be done collectively by every camper, alongside with a paid maintenance person who will be on site full time (ideally a local person). Guidelines will be set up for the campers to follow, for example to make sure all campers are educated of the “Leave No Trace” principles (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 FindR 6. Dispose of Waste Properly 7. Minimise the Effects of Fire). Campers will be required to maintain the infrastructure, responsible for taking out the compost before they leave as well.

Regeneration

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

Online System



There will be an official website and other social platform for campboo to announce workshops, getting in touch with campers, taking suggestions and undergo surveys. A logo is developed for campboo with a co-designer.

Possible Challenges

Possible Challenges

Finance

As camping is still not as developed and popular in China as it is in other countries, not a lot of people care about this activity. This project might not be as appealing for the local government or individuals to fund. How would we pursue the local government to fund this project, especially with an easily corrupted government system China has.

Possible Challenges

Safety

As mentioned, there might be vipers and other species that be harmful for humans. If situation like this happen, there might be conflict between the camping site and individuals. And should children be allowed in the site?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Design_Production_Project_Outcome
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Project Outcome

3D Model