

Portfolio

Mari Taylor



Architectural Projects

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BUFFER ZONE

The buffer zone creates a micro-climate, saving the energy needed to cool the interior. At the same time the timber frame acts as a balcony for the residents.



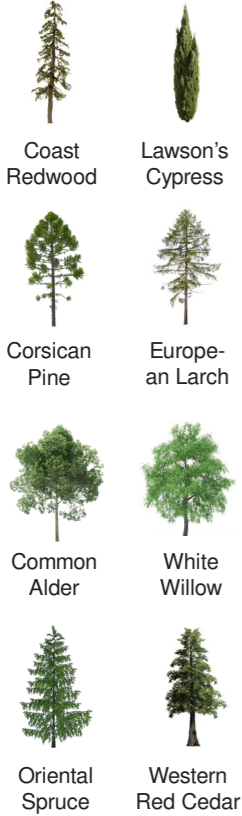
Honeysuckle will be used to climb up the buffer as it is a non-invasive, deciduous plant. This allows light in during the winter and protection from overheating during the summer.

EXISTING VEGETATION

This area will be left as it is, as young saplings and vegetation have been planted recently and need time to mature.

ZONE B

Zone B is higher on the site, meaning the soil is drier and less prone to surface water build up. However it must still tolerate flood risk as extreme weather will still affect this area. Therefore the soil parameter was set to moist/very moist to locate trees that can tolerate this and 2080 predicted climates.



Including also Red Oak and Macedonian Pine

ZONE A & B

Herbaceous ground cover for wet, moist and damp soil types



COMMUNITY ALLOTMENTS

- An area with a good amount of morning sunlight and shade in the afternoon is most ideal
- 6 to 8 full hours of sunlight.
- Soil testing for contaminants must be undertaken

Top down approach from SYHA, they would organise and put it together (benefit of this would be potential for more profit for SYHA through membership fees)

Grassroots approach involves organisation amongst the users (benefit of this is that the community would have to come together to form agreements and rules)

Combination approach (benefits both SYHA and the user. This could involve a combination of top down organisation and with membership fees involved as well as input from the users so that all needs are met)

BIOSWALES

A mitigation measure located at the lowest point on the site to prevent future extreme flooding within the site and its neighbourhood

A green corridor, protects users from air pollution through multi-layered planting, achieves urban cooling through increased greenery, promotes health and well-being, creates habitats and protects the ecosystem.

ZONE A

Zone A is the lowest point on site and the location for the proposed bioswales. Therefore the vegetation and tree species must be able to tolerate extremely wet soil types and mitigate flood risk. Therefore the soil parameter was set to wet/very wet to locate trees that can tolerate this and 2080 predicted climates.



Year
2021

Duration and Role
4 months
Group project

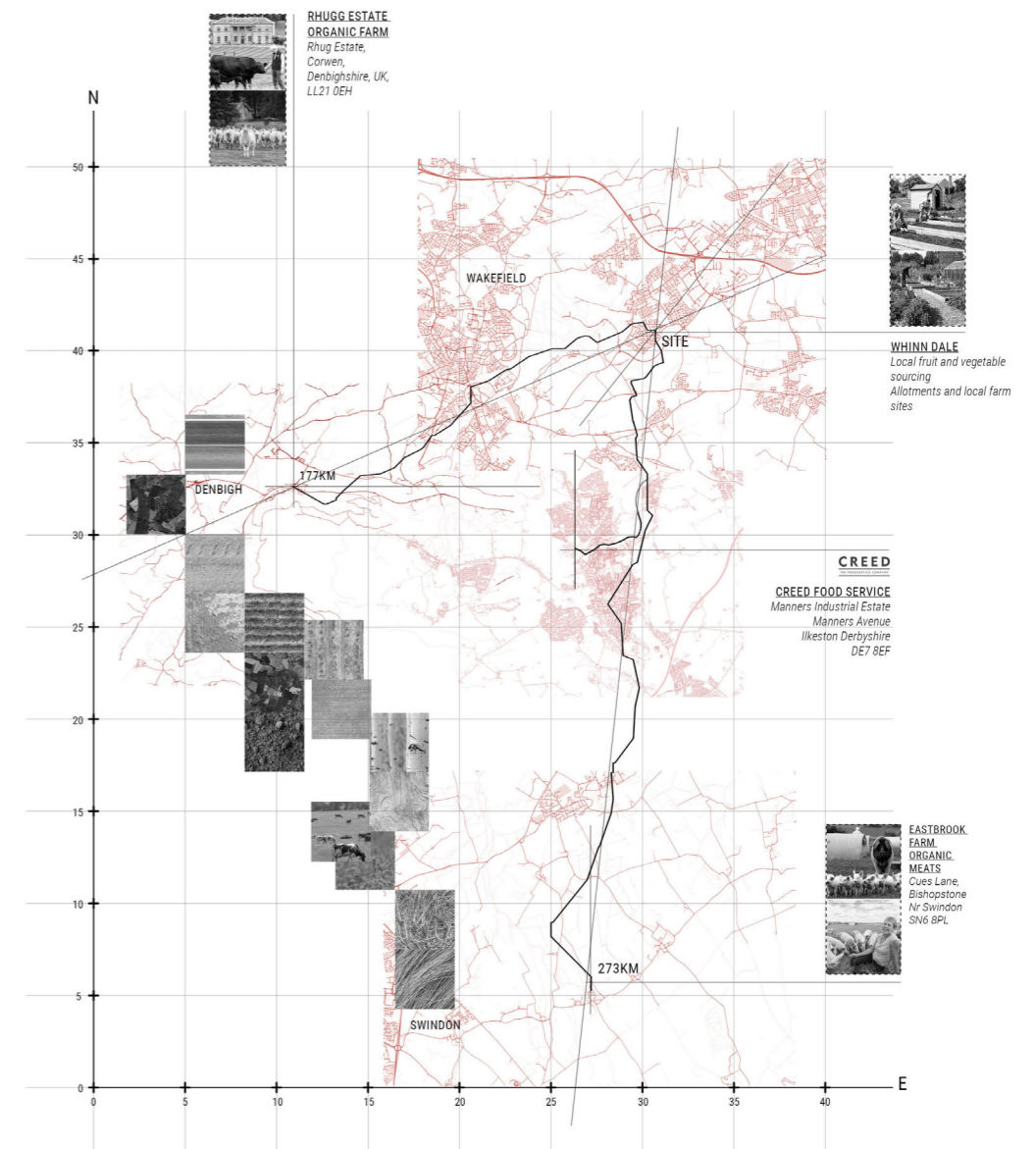
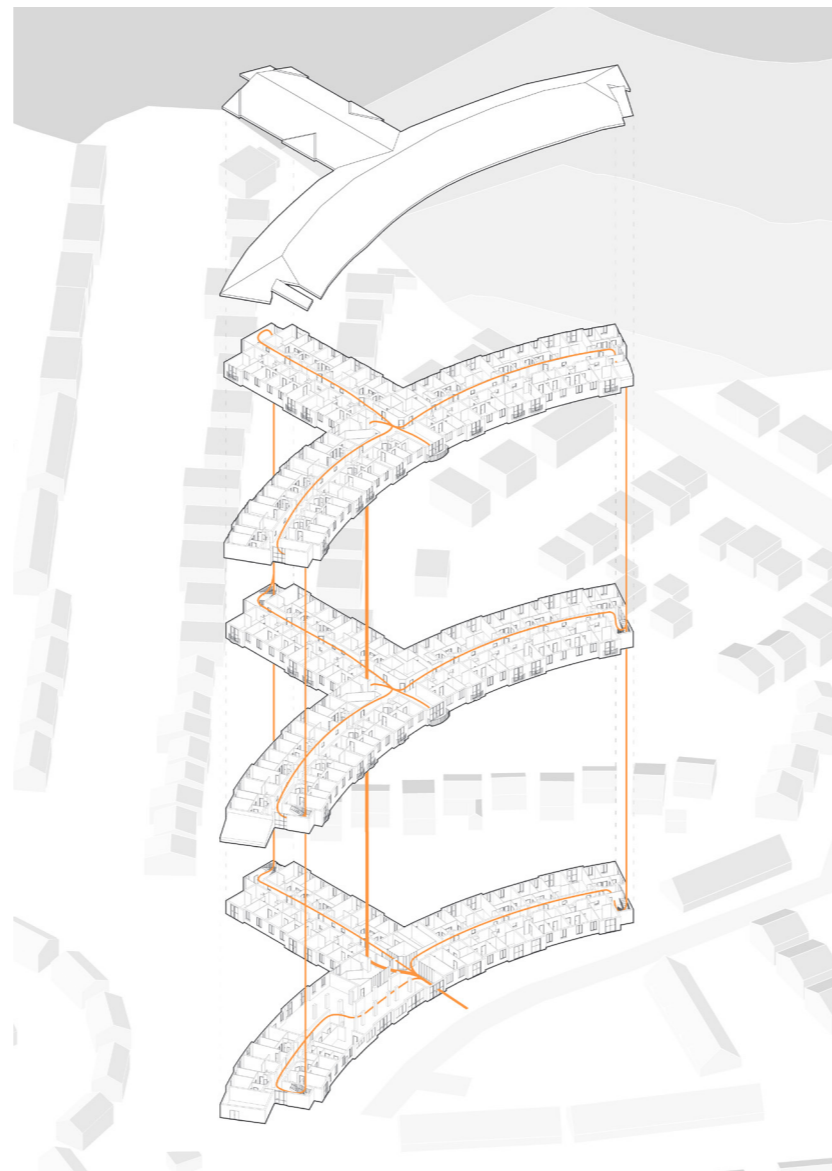
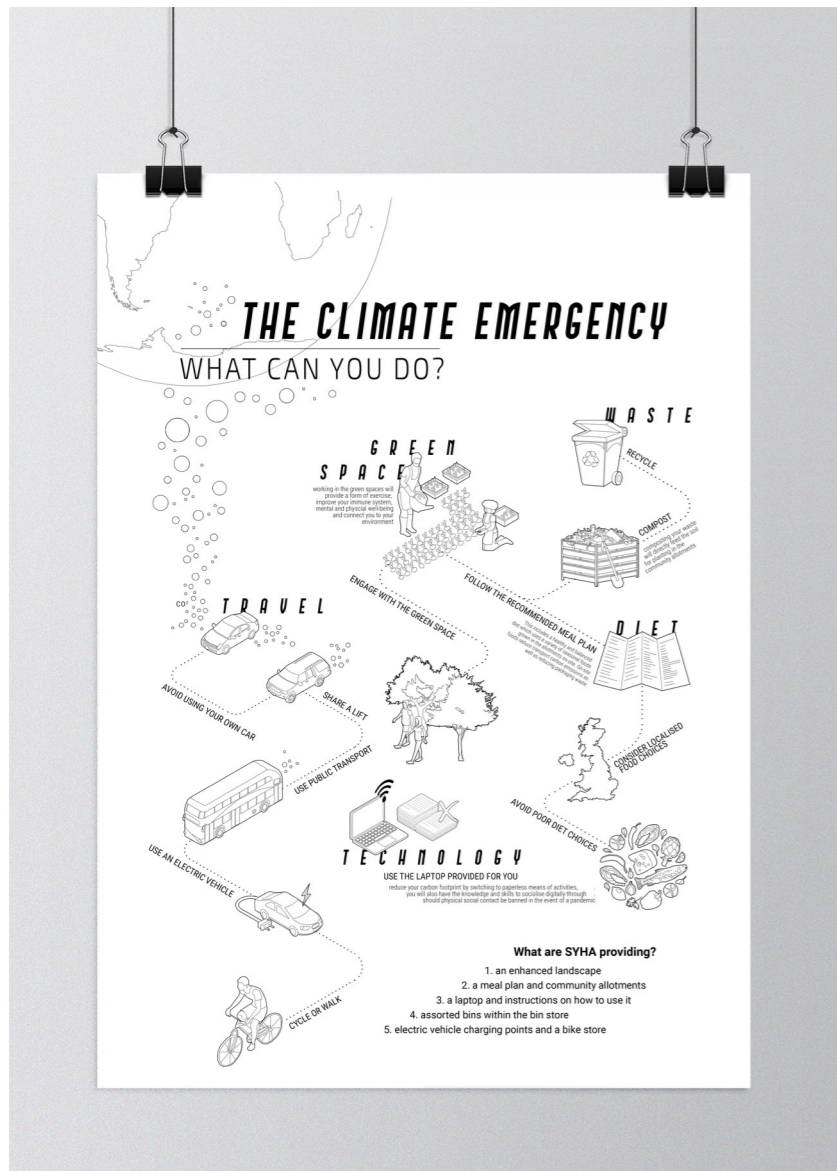
Typology
sustainability framework

Location
Wakefield
UK

Total site area
15230m²

Software used
AutoCAD
Illustrator
Photoshop

Top Down Sustainability Framework Whinndale



First: Poster
to inform residents of Whinnale on the new strategies that were put in place as a part of the sustainable masterplan. Completed using Illustrator and Photoshop

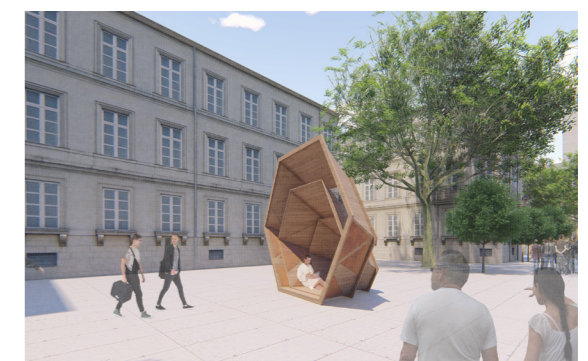
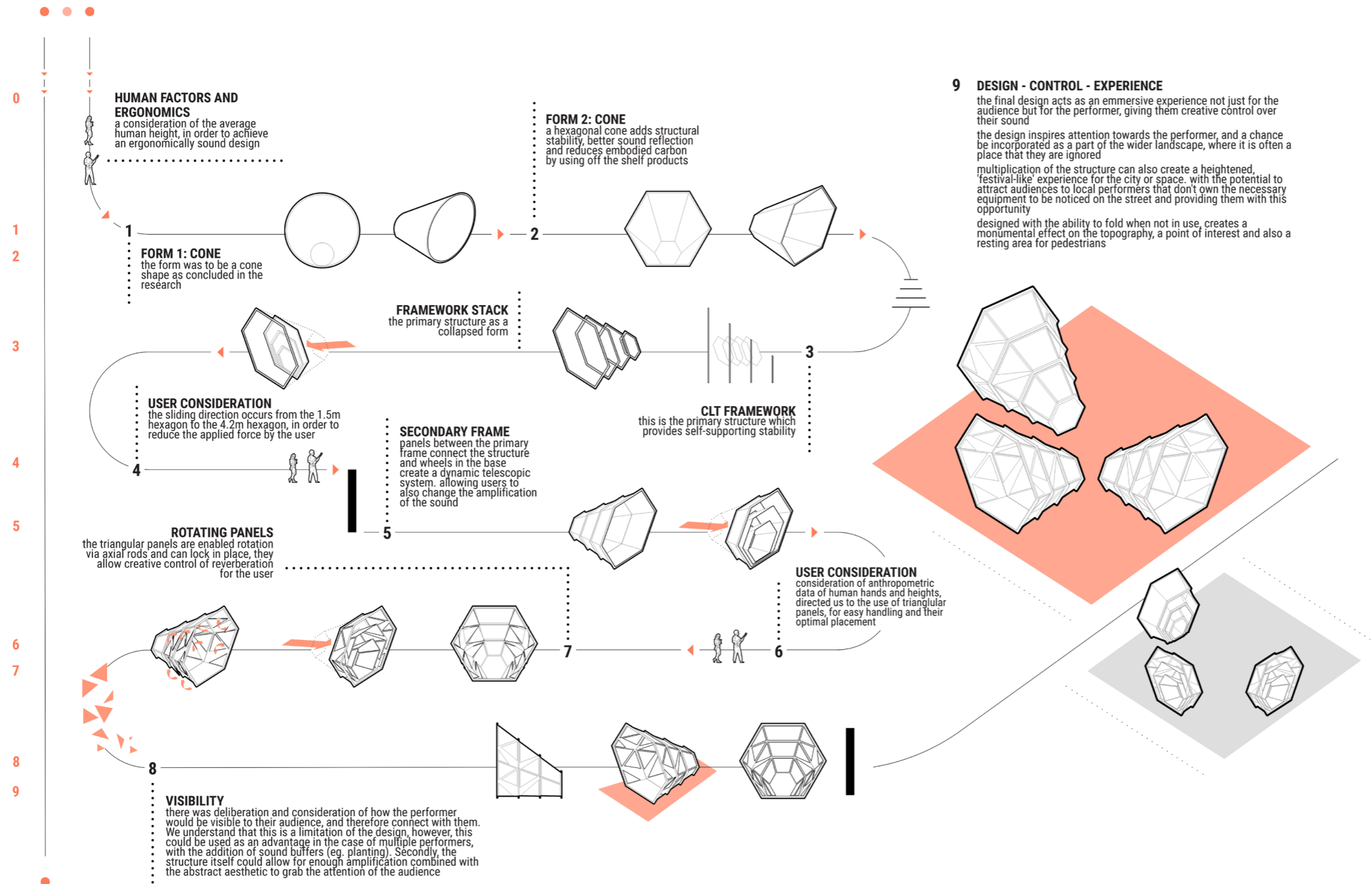
Second: Circulation Diagram
completed using AutoCAD and Photoshop

Third: Sustainable and Ethical Food Sourcing Map
These farms and distributors utilise carbon offsetting methods in order to reduce their emissions which could help in offsetting embodied carbon in transport. Mapping completed using AutoCAD and Photoshop

Brief: To provide a plausible framework to adapt the current care housing stock towards climate emergency and potential future pandemics

Climate change is one of the biggest global challenges facing humanity since the industrial revolution. The UK is ranked 16th in global emissions contributing 1.1% of the total carbon emissions. Of this 1.1%, 40% is provided by the UK housing stock. In light of these alarming statistics, SYHA has opted to employ de-carbonisation strategies to upgrade

their existing care home facilities. We aim to provide a plausible top-down framework that caters to de-carbonisation strategies but more importantly, human delight and well being. The priority of the framework shifts from 'de carbonisation' to sustainability goals - in particular, Future and global responsibility. SYHA's Whinnale building in Wakefield is the project for which we establish the framework, but the aim is to ensure its transferability across the entire housing stock.



Year
2021

Typology
Design
Technology

Duration and Role
1 month
Group
project

Software used
Illustrator
Photoshop
SketchUP
VRay

The device was designed to allow street musicians to passively amplify their performance in order to overcome barriers which they face with engaging the public or competing with ambient sounds. It aims to open up opportunities for performances to take place in locations where sound quality is not ideal and street musicians tend to avoid by enhancing the acoustics of these spaces. The project had a goal to give the user creative control of the process and their acoustic preferences, such as reverberation and volume, using two different materials. It allows user accessibility and simplicity, without confusion - incorporating basic user control principles as researched. Everyday festival installation is a passive system that aims to reduce energy consumption of sound amplification devices and it uses low impact materials.

Everyday Festival Installation, Passive Sound Amplification

Year
2020

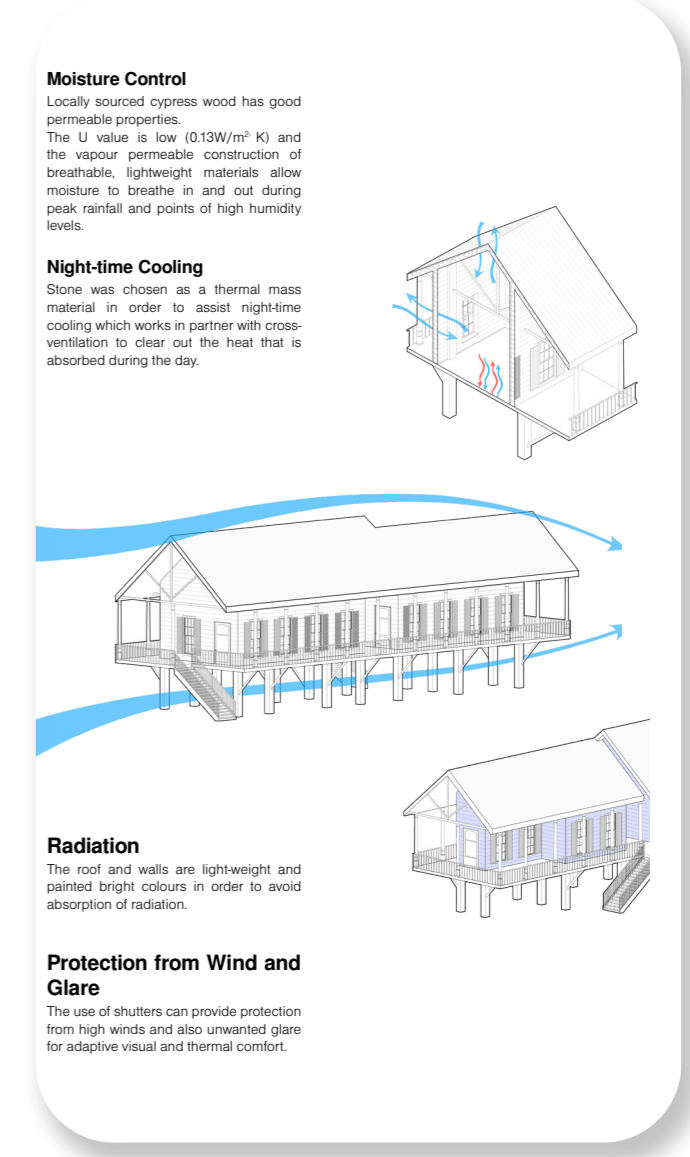
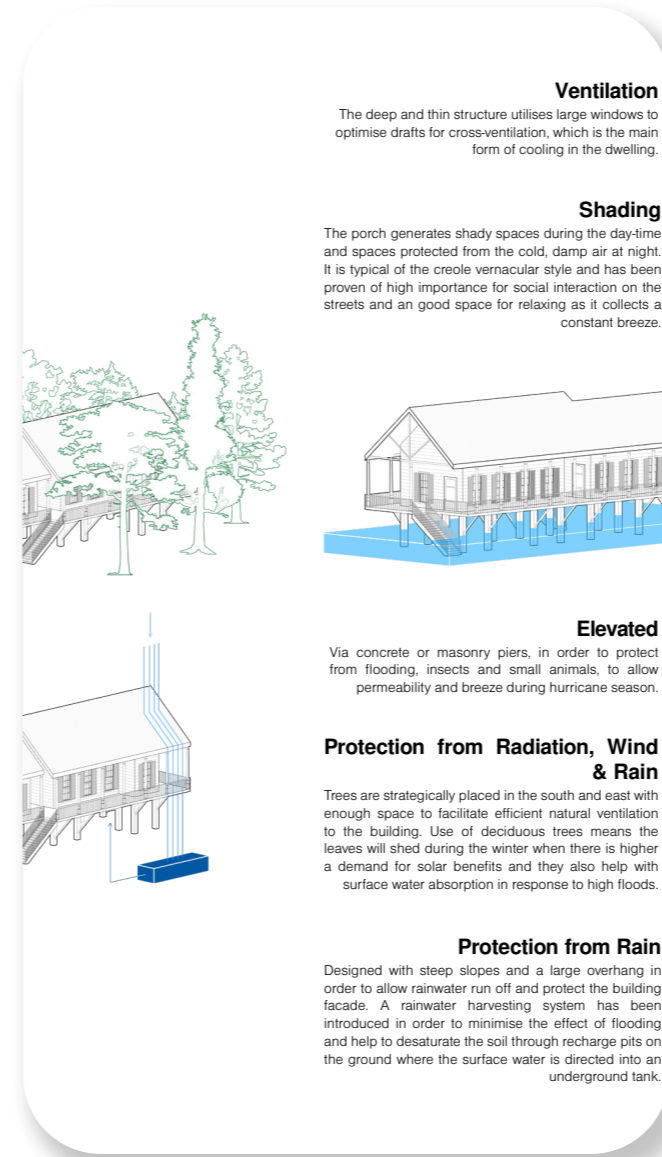
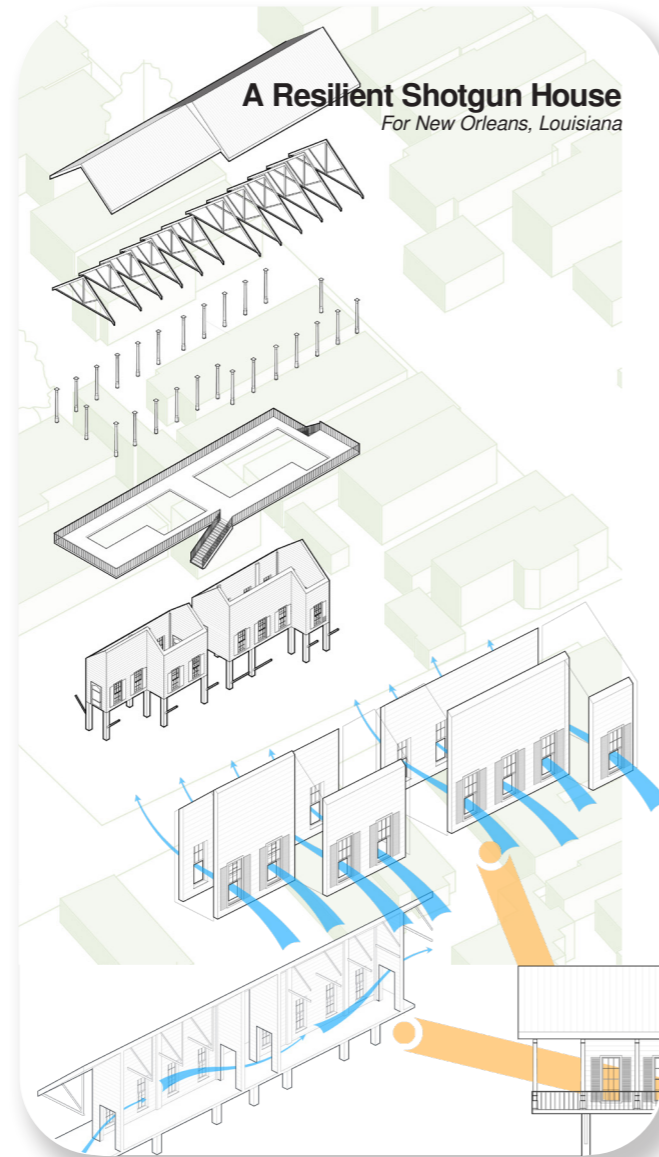
Duration and Role
1 month
independent
project

Typology
contemporary
vernacular
domestic
dwelling

Location
New Orleans
USA

Total build
area
110m²

Software
used
Illustrator
Photoshop



New Orleans Vernacular Architecture Design and Mobile Graphic Exploration

New Orleans, Louisiana has a climate of extremes, with 50% of the land sitting below sea level. It is facing and predicted to face catastrophic climatic difficulties in the form of subsidence causing the ground to sink, extremely high flood risk and frequent tropical storms.

- It was identified that the current major climatic problems are as follows:
- Extremely hot summers with high solar irradiation
 - High humidity and frequent rainfall
 - High winds from the south and east during hurricane season (June-November)
 - Tropical cyclones and frequent flooding due to low elevation

These elements are due to increase in the future as a result of global warming.

This project focuses on the building physics principles of Creole vernacular architecture, bioclimaticism and how they can be translated into a contemporary, resilient design to passively manage the current and future difficulties of the climate.

Specifically, the renowned vernacular 'shotgun' house of the 1830s was analysed and adapted for a changing climate, as it is the most common residential housing type of the city to this day.

Year
2020

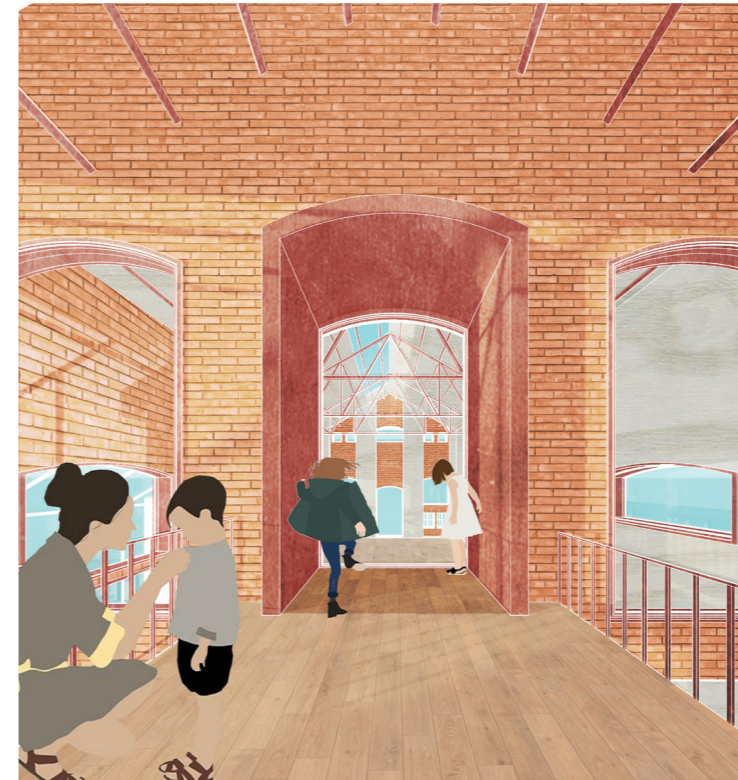
Duration and Role
4 month
Group
project

Typology
Retrofit to
community
Centre

Location
Helsinki,
Finland

**Site
area**
18000m²

**Software
used**
Illustrator
Photoshop
AutoCAD
InDesign
SketchUp
VRay
Revit



Built in 1901, Pasilan Konepaja is one of the oldest Finnish Railway stations in Helsinki. Our project aimed at the retrofit of the 850m² Power Station to the buildings on site. The brief was developed to reflect the building's historic importance in a culturally significant location whilst addressing the environmental challenges of the harsh climate in Helsinki. Airtightness measures, reduction in thermal bridging, ventilation strategies and use of renewable energy sources were factors that added to the complexity of the project. The structural system involved a 'building within a building' approach so as to retain the integrity of the exterior historic building fabric. The wall and roof construction details were optimised to significantly reduce the energy use intensity of the building. Considering the relationship between the few daylight hours and depression rates in Finland, our objective was also to improve light quality within the building to strengthen the mental health of its occupants.

Retrofit of Pasilan Konepaja Power Station

Building Within A Building

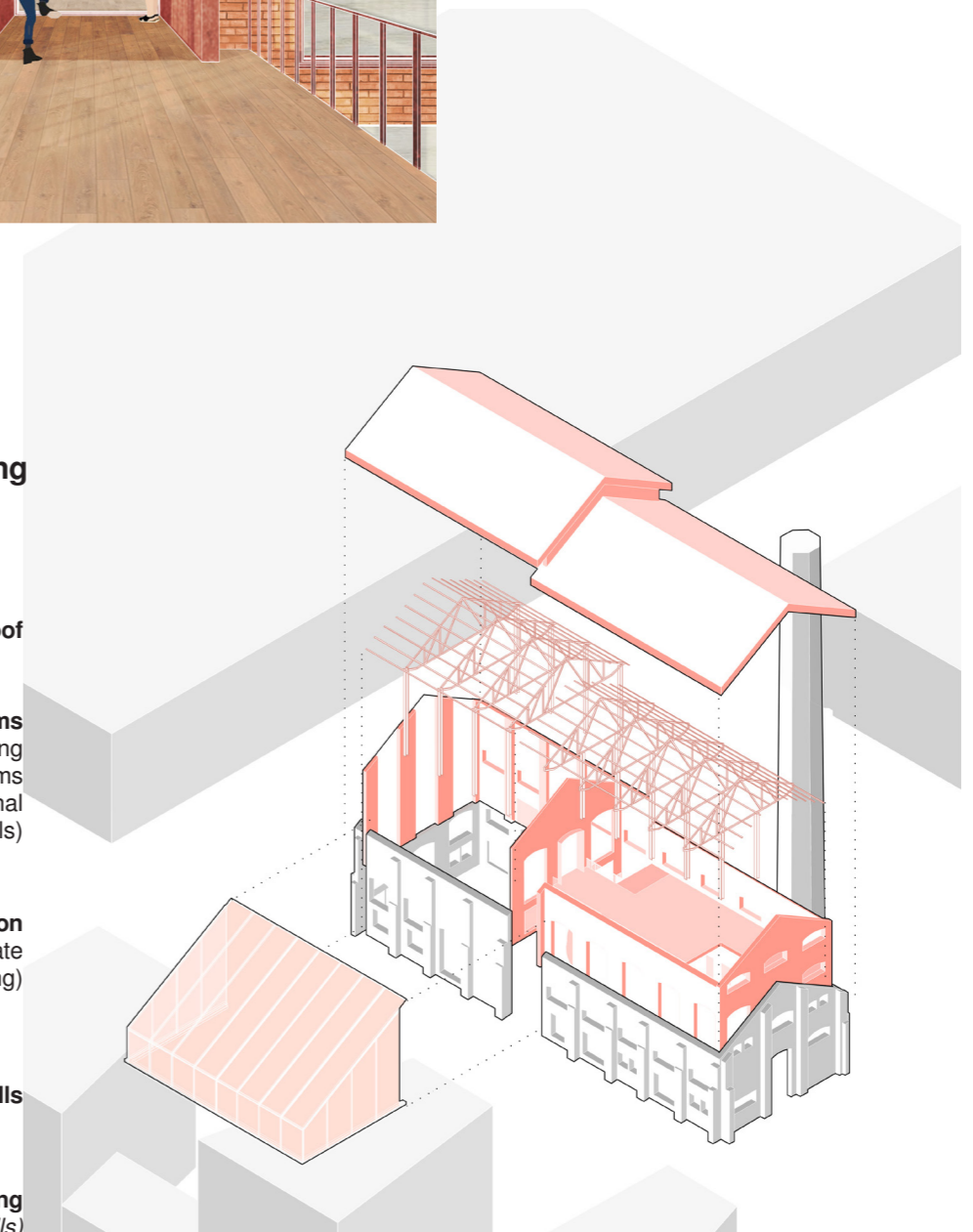
New Roof

Existing steel truss and new beams
(cut at each end to avoid thermal bridging and supported via recycled steel I beams which sit inside and outside to the internal walls)

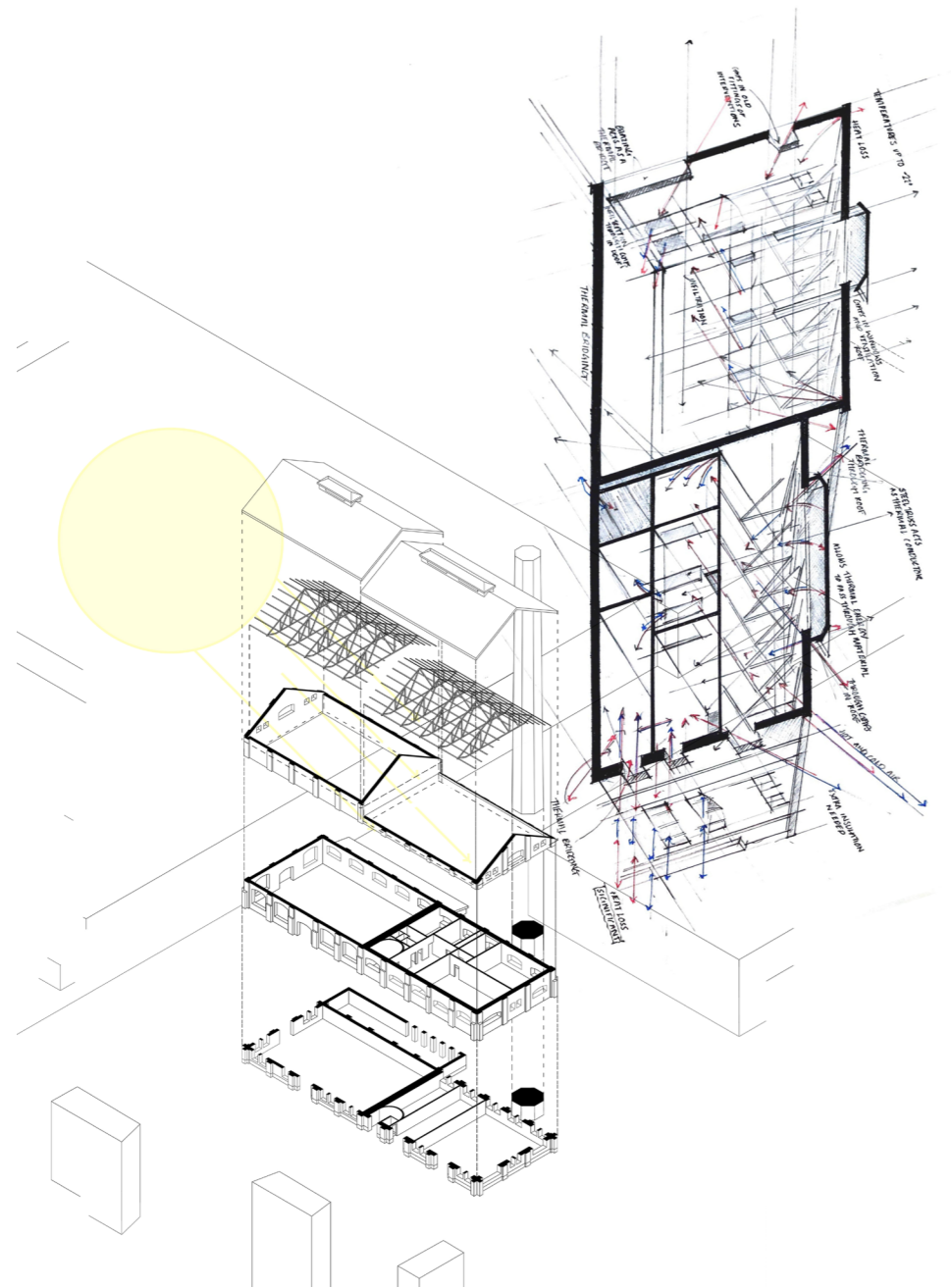
New internal Wall and Insulation
(400mm taller than existing to accommodate new roof thickness and avoid thermal bridging)

Existing Building External Walls

New Extension with 60% Glazing
(connects to new roof and walls)

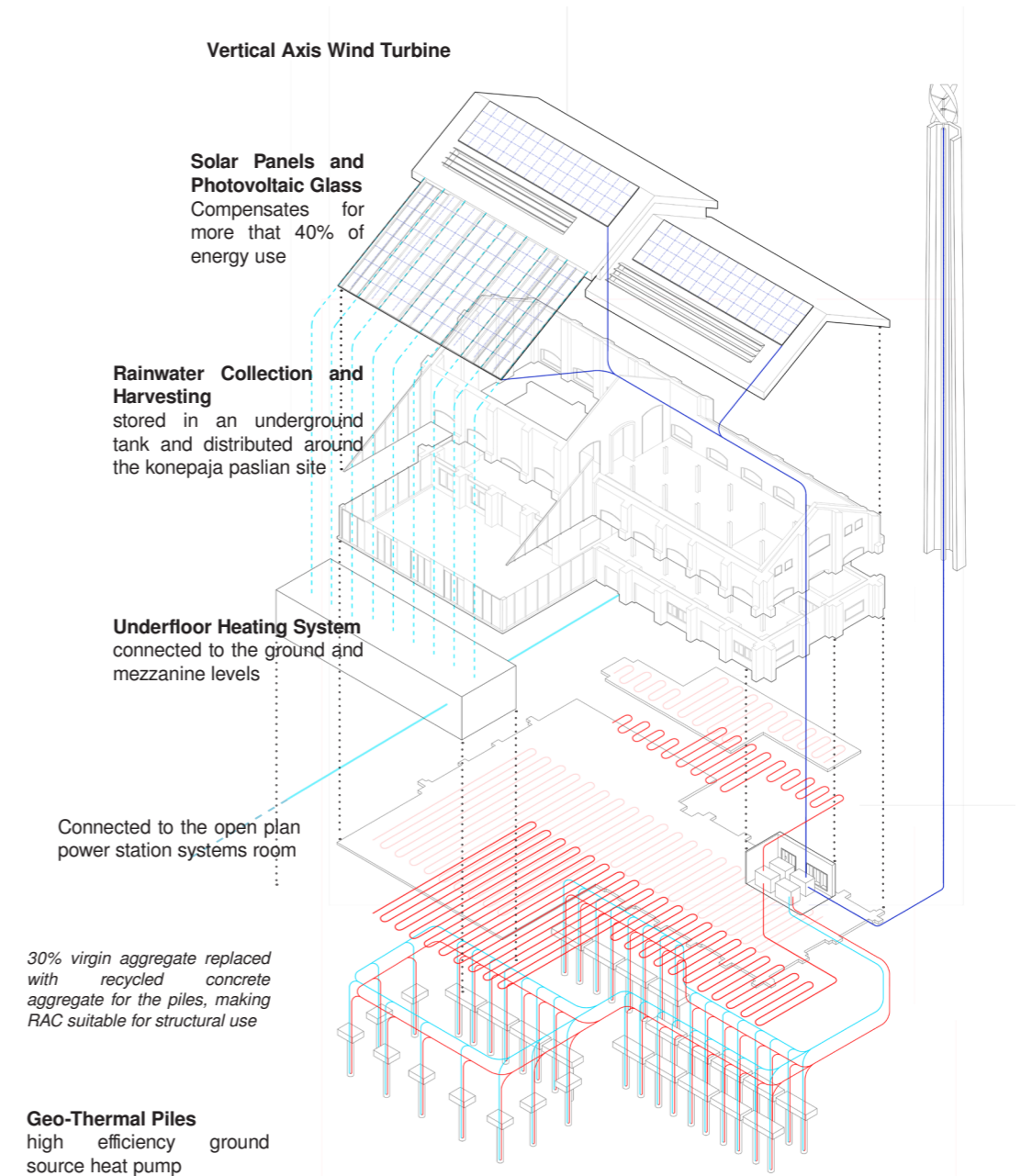


Building Analysis



Prevailing wind from the *south west direction*
Toxic chemicals in the roof consumption
 Annual energy consumption **722KWh/m²/yr**
 Angle of incidence **low in winter/high in summer**
Low radiation in the winter
 Pre-cast concrete slab creates extremely *low indoor illuminance* (0-80 lux annually)
inefficient ventilation
 Frequent infiltration at openings **thermal bridging**
Load-bearing external walls double brick pile foundations stone pilasters for *structural integrity*

Renewable Energy Systems





A Great Vessel For

Isolating with wholeness
 Transforming feelings of loneliness into feelings of abundance
 Finding joy in body maintenance
 Reassessing social life
 Committing to boundaries
 Newfound independence
 Manifesting financial stability

Performances

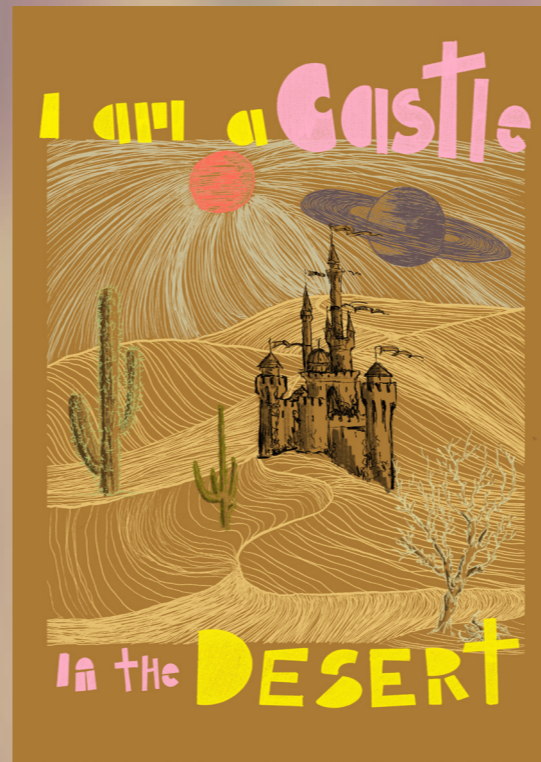
Drag your mattress to the center of the room. Swim out to the center of a body of water. Place a blanket in an open, grassy field and have a picnic. Drink out of a large clear glass in direct sunlight. Sing to your plants. Choose your friends wisely.

A Great Vessel For

Building confidence
 Claiming control over your energetic field
 Glorifying the silent, unseen labors of projects and dreams
 Rejecting the need for attention and validation from outside forces
 Remaining cool and solid of moments of intensity
 Resilience
 Protection

Performances

Go somewhere public with a journal. Ignore the gaze of others. Wear headphones on public transit. Invest in a cream, quilted coat that goes to your knees. Forget every insult. Place your hand over your belly button. Create something you don't show anybody, ever.



A Great Vessel For

Trust in yourself and the universe
 Observing the human condition from a distance
 Placing yourself above a situation that upsets or torments you
 Tapping into the ether body to take a break from the demands of the earth body
 Making peace with ephemerality
 Lightness
 Shapeshifting

Performances

Go on a bike ride on a completely flat, level road. Meditate for so long you start travelling elsewhere, or maybe you're just falling asleep. Steam your face in a small pot over the stove. Take a walk where you do nothing but listen. Witness things without words, just as entities. Visit a float tank. Forget your name.

Things you can pretend to be when you feel uncentered

Gabi Abrao

Word art posters, inspired by Gabi Abrao's 'things you can pretend to be when you feel uncentered'. With each poster, I aimed to create a style completely different to the last. This was to showcase the diverse range of approaches I am capable of, and to also push myself to think in different directions. Gabi Abrao's readings encourage visual thinking and therefore provided perfect guidance for the artwork. I completed the designs using Procreate for iPad and Adobe Photoshop.

Artwork

I began producing acrylic pours in 2019. This became a hobby during my weekends. All the acrylic paint pours you can see here are A1 or A0, as I like to create big, dramatic pieces. Some of these were completed as commissions for friends, relatives or online buyers.

I recently began experimenting using Procreate for iPad. This has allowed me to create and paint without the mess. I feel that Procreate will allow me to elevate my art in the future, and to merge digital and manual expression.



Photography

I am passionate about photography as a creative outlet. This is a small collection of my photographs. I am inspired by human connection and behaviour, the natural world, culture and colour. I aim to create a sense of peace and stillness in my photographs. I am inspired by film photography and use this medium as a way of highlighting the details in the places I go.

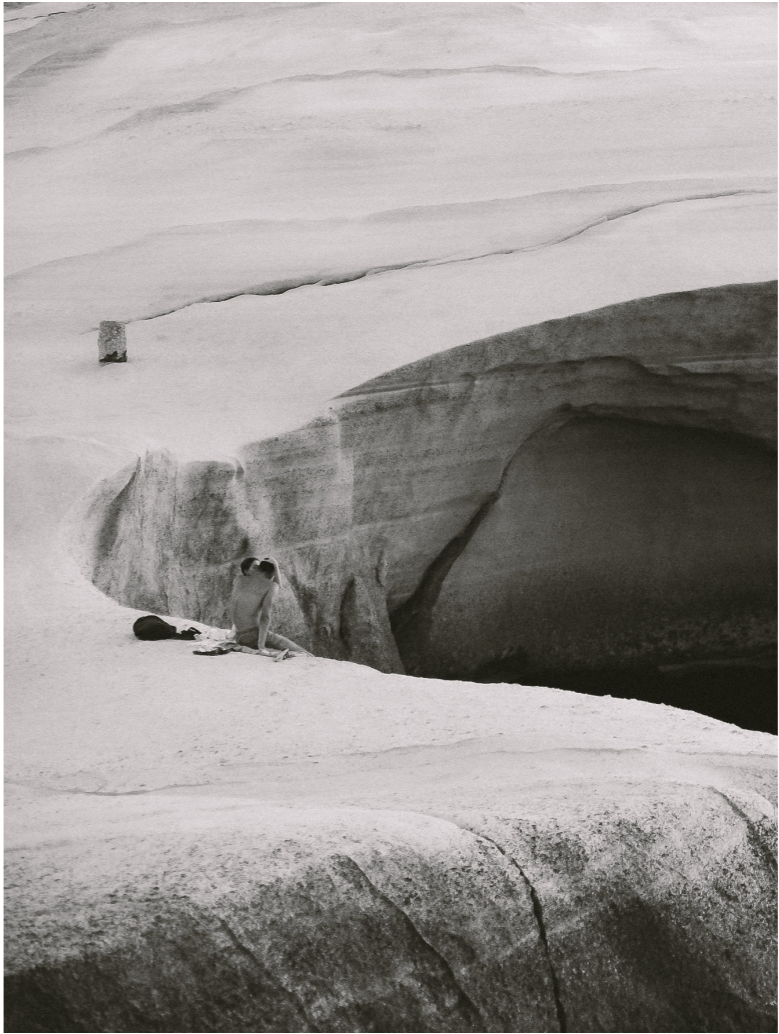
The photographs here were captured on a Fujifilm XT-30 in Milos Island.



01

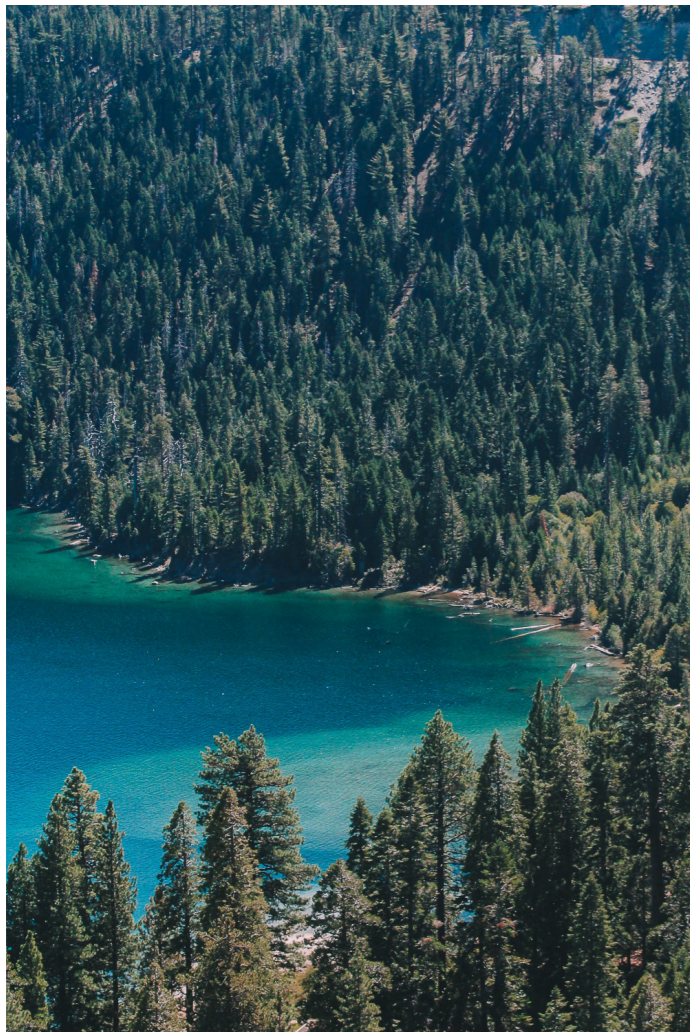


02



03

Photographs 04, 05 and 06 were shot on a Canon during a trip to California.



04



05



06



07

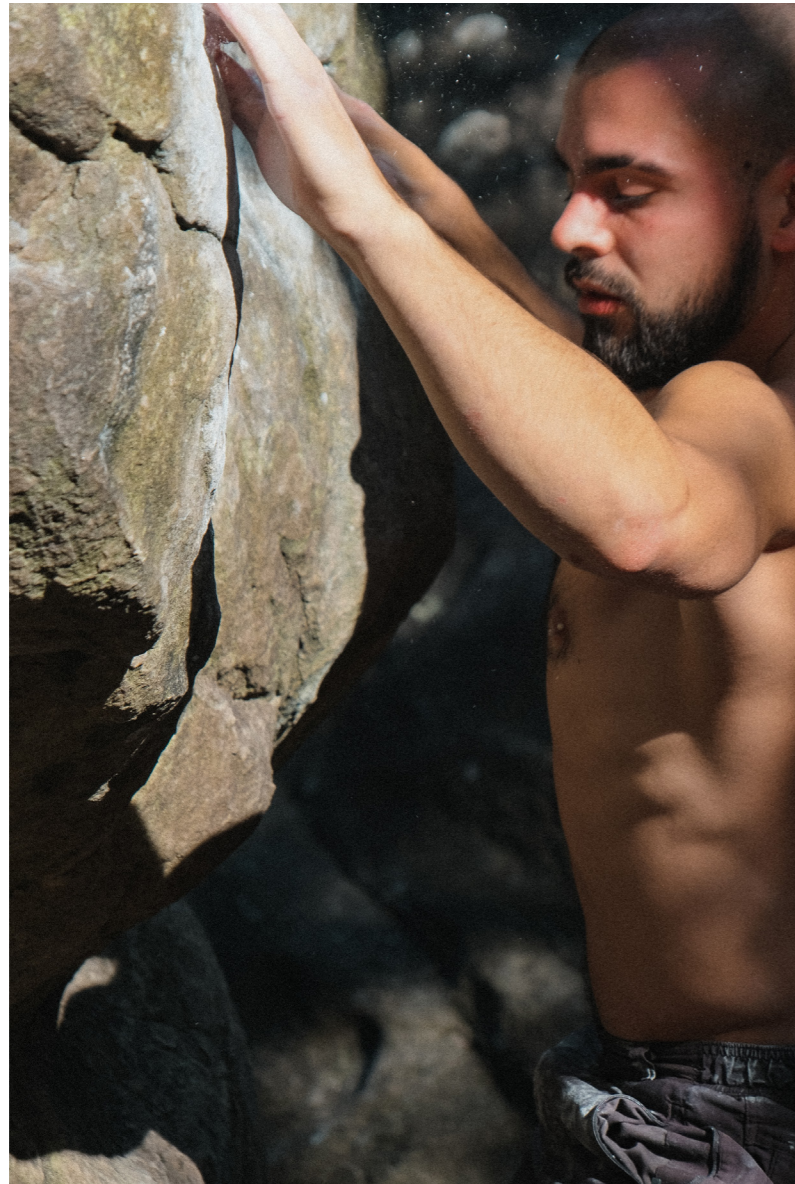
Images 07, 08, 09 are glimpses of the streets of Athens.



08



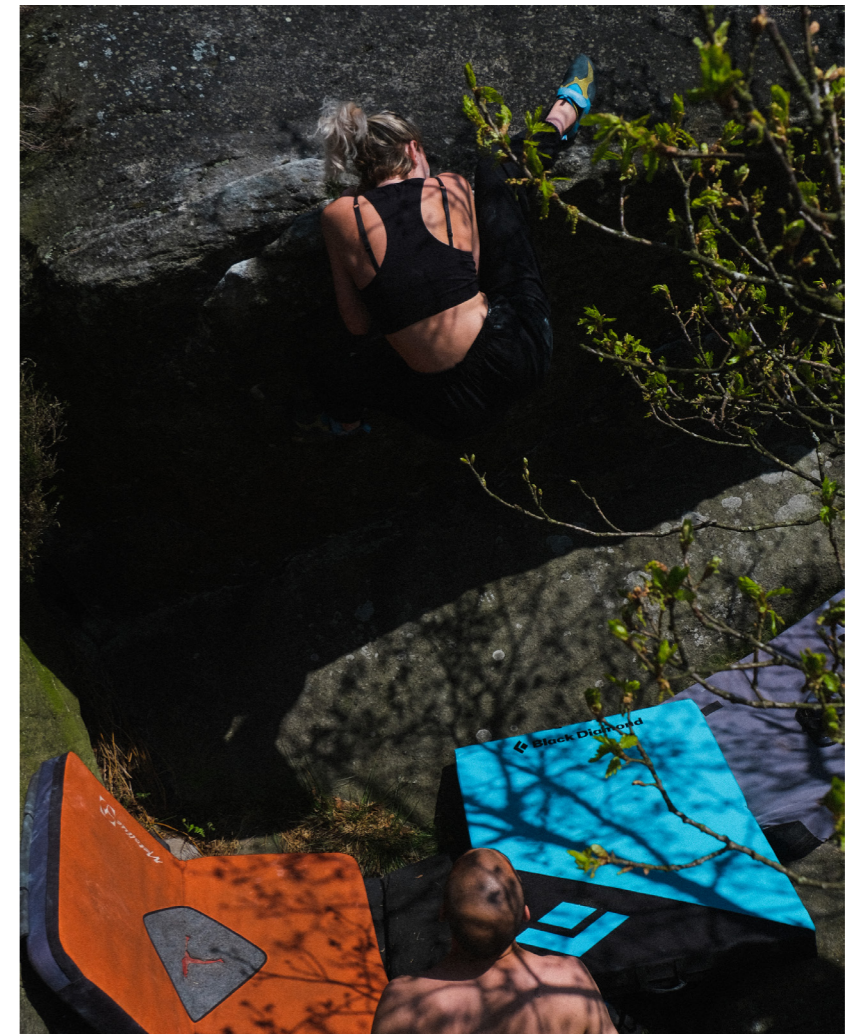
09



10



11



12

Image 10 was captured in the Fontainebleau, France. Images 11 & 12 were captured in the Peak District, UK.