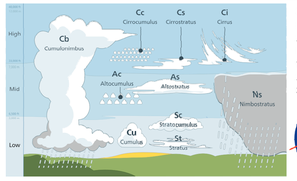
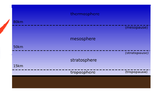
CONTROL CLOUDS

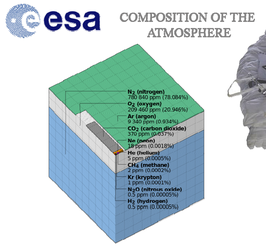
What would you do if we could change the course of the clouds?



The troposphere is between 5 and 9 miles (8 and 14 kilometers) thick, depending on where it is on Earth. It is thinner at the North and South Poles.

Clouds above the troposphere. Clouds are found almost exclusively in the troposphere. The stratosphere is very dry, because vertical transfer is limited by the high stability and because any transfer would have to occur through the tropopause, which is so cold that the saturation vapour pressure is negligibly small.





COMPOSITION OF THE ATMOSPHERE

Option 1. The cloud stabilizes and does not move

Option 2. The cloud that gets through; it dissipates and dilutes in fog water.

To stop the NimboStratus clouds, we will use satellite formation as a virtual mountain; With heat sensors; to create a magnetic field or a mountainous virtual space. Depending on the scale of the cloud, we will use 14-20 satellites as an example. But it will depend on the area and the scale we want to protect. given the small size of Fly Ranch; 14 satellites will be enough.

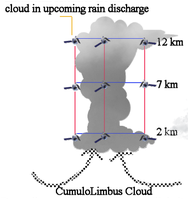
A) STOP NIMBOSTRATUS

STRATUS	St This stratum up to 800 meters is weak and very beneficial rains. We will not consider them.
NIMBOSTRATUS	Ns Between 2 and 3 km. Continuous precipitation. We can modify them.
ALTOSTRATUS	As Between 2 and 5 km We will not do anything with them but we can know that there will be a storm soon (in occasions)
CUMULONIMBUS	Cb. Heavy showers and thunderstorms. Inside warm and humid air spirally and vertically.

A) STOP CUMULONIMBUS

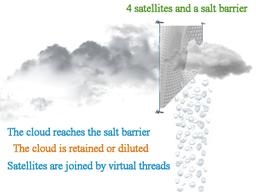
Passive solution. Whether we place the great storm on the sea or on a lot of inhospitable terrain; We can send Eurofighter Typhoon fighter planes to spray with saline material that dilutes the water from the clouds and so when the cloud area arrives, it will no longer be so strong. Or other nitrogen-like material that creates microparticles as mini blasts that make water evaporate.

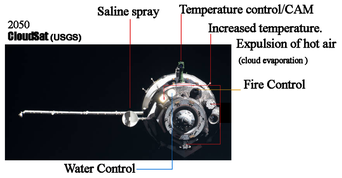
Intentional satellites around cloud in upcoming rain discharge

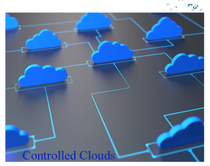


Depending on the cloud volume we'll do it have more or less satellites. We must also know which are microsatellites

Conceptual process



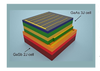




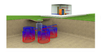
Rain is always good. The world needs rain. But in many countries like England, crops, infrastructure, animals and even people are destroyed every year due to heavy rains. These are the ones we need to control.

To get an idea, on the west coast of England, we need about 300 satellites of this kind.

ENERGY



Solar panels will operate at night capturing the invisible infrared light of the Earth, they will use a thermoraditive cell, which is capable of generating electricity from radiative cooling (University of California - Research).
The new design, published in Advanced Energy Materials, turns direct sunlight into electricity with 44.5% efficiency (George Washington University - Research)



Geothermal heat pump. For the proposed community spaces (seasonal housing) we have geothermal energy in the land that serves as heating for pavement and hot water

We don't consider wind power because it's not profitable. given the wind data consulted. We can't put something on because it looks good.

WATER

Storage. Placing of a cistern (water tank) at the end of the channel - run-off of the two semi-rivers - drinking water (the origin of which is the melting of snow from the mountains).

Fog water collectors. Located in the lower zone near the channel of the semi-rivers. They go to the general cistern.

Composting toilets. Placed in all community spaces.

Lower Parcel Near Gerlach (360 acres). This plot will be used as a 100% greenhouse, whose cover will serve to collect moisture by condensation and store the water in a pond.

FOOD

Agrivoltaics. We lift the panels in the northern area with a substructure that serves to cultivate on one side and capture solar energy. energy on the other; And at the same time, the upper enclosure serves as a greenhouse for some crops that require it or simply serves as shade for crops that do not resist sunlight at high temperatures.

SHELTER

We have created community spaces, which are not houses; but places to sleep, discuss, meet, do workshops, ... are passive spaces where use can vary. Visitors (non-tourists), be they scientists, collaborators, ecology curious, etc., can stay 3 to 5 days or 3 to 4 weeks.

We haven't made modular container-type spaces, but spaces made of ecological concrete that capture CO2. We'll be here for about a minute. 50 years and therefore; having containers to live is like living in caravans or watching a B movie from the 1970s; and for one thing they have done this competition; In addition, the use of modular sleeping containers requires a thermal insulation that would produce too much polluting material.

OTHERS

- We will not use any kind of circular economy, water treatment, purification, composting or large-scale recycling because this is a place to CONSERVE And this means that any factory will produce noise pollution, environmental impact on plants and animals in the area, or it will simply need a lot of energy to transform something that only serves as an example; if you want to do something that will be done outside this area and not in this competition.
- This area is a place to take care of and intervene as little as possible.
- In our project, we'll use a 10-meter strip every 200 meters as a fire protection or firewall measure, which we'll burn every 6 months Substances will be available on their land and will not alter the biodiversity of the area (especially plants and animals).
- CO2 collectors. Our project is based from time to time on the ground; It's not just a hole-gap, but a place to descend and realize the vastness of the area. A place that makes you control the scale, a place that makes you live the environment.

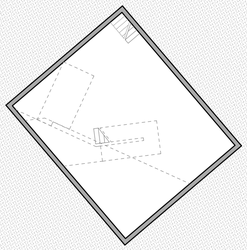
  Two of these spaces, the two farther south, have been placed two atmospheric CO2 collectors, which are stored underground and trucks, they will come every six months to transport the CO2 caught during that time.

We do not know the exact positions of sculptures or elements that cannot be moved; These elements will be inserted in our project.

Viewpoint. Sculpture. Air control. Geyser

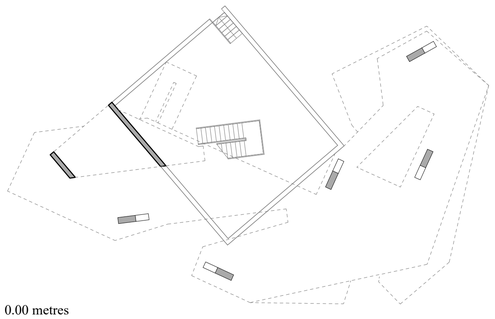
The Geyser only required a ViewPoint

LEVEL BURIED



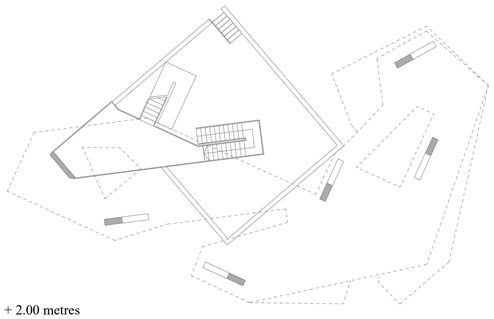
-1.00 metres

GROUND FLOOR



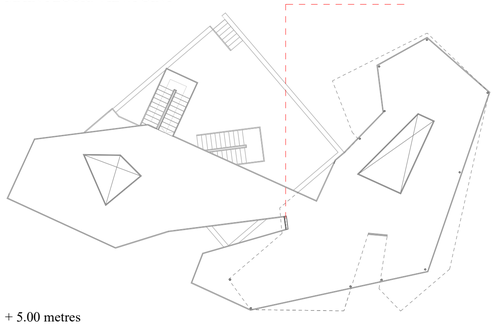
0.00 metres

INTERMEDIATE FLOOR



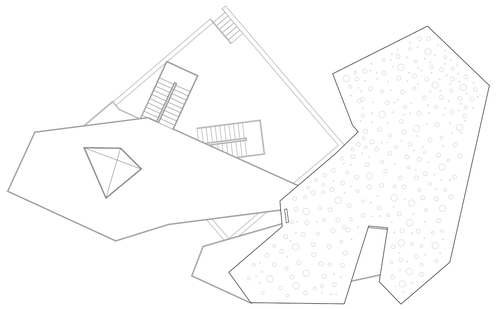
+ 2.00 metres

MAIN FLOOR. VIEWPOINT



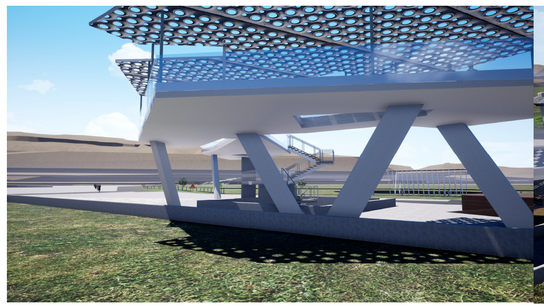
+ 5.00 metres

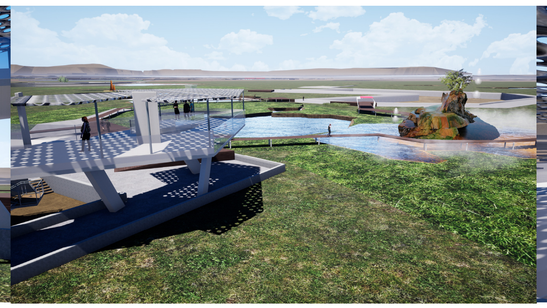
ROOFTOP

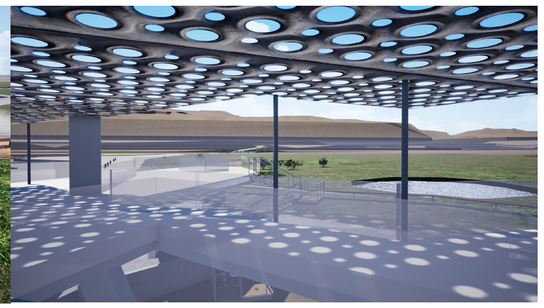


Scale 1/200

Viewpoint.
Sculpture.
Air control.







Looking at the Geysers, we have a Viewpoint that not only looks at it, but looks at it to be seen, and because of its shape, it's a Sculpture, and it also controls the Air quality of the area. (triple function)