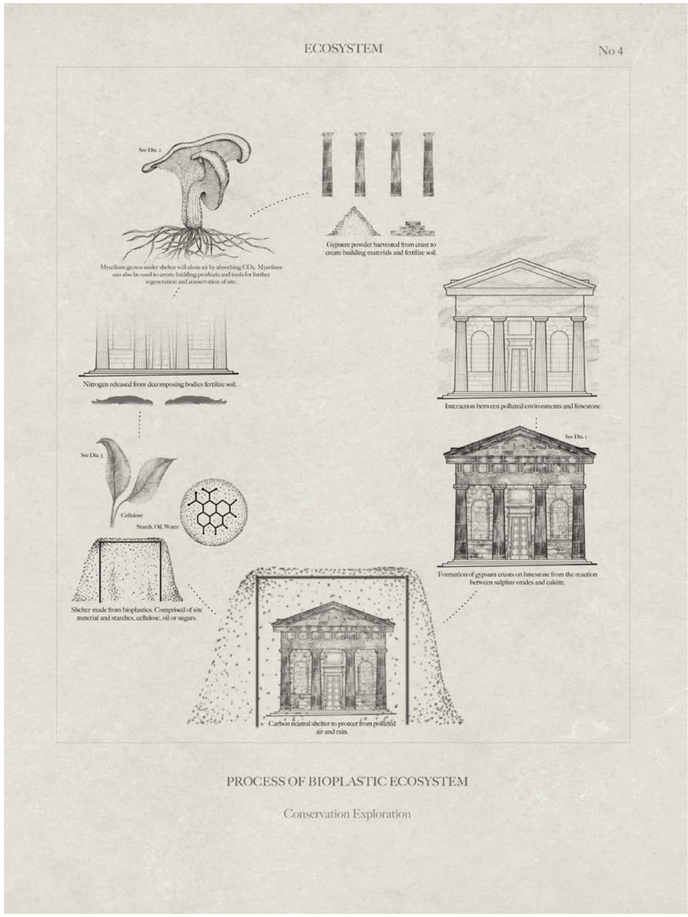
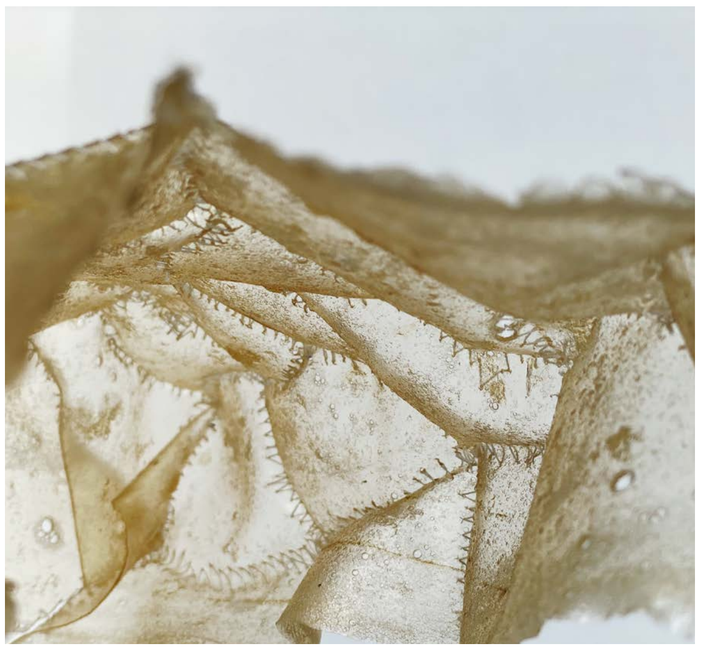
RITUAL


ECOSYSTEM
No 4
See Dia. 2
Mycelium grown under shelter will clean air by absorbing CO2. Mycelium can also be used to create building products and tools for further regeneration and conservation of site.
Gypsum powder harvested from crust to create building materials and fertilize soil.
Nitrogen released from decomposing bodies fertilize soil.
Interaction between polluted environments and limestone.
See Dia. 3
Cellulose
Starch, Oil, Water
See Dia. 1
Formation of gypsum crusts on limestone from the reaction between sulphur oxides and calcite.
Shelter made from bioplastics. Composed of site material and starches, cellulose, oil or sugars.
Carbon neutral shelter to protect from polluted air and rain.
PROCESS OF BIOPLASTIC ECOSYSTEM
Conservation Exploration



EXPLORING MATERIALITY AND FORM THROUGH MAKING

BIOPLASTIC
Cornstarch
Water
Vinegar

GYPSUM PLYNTH

BIOPLASTIC
Gelatine
Glycerine
Water

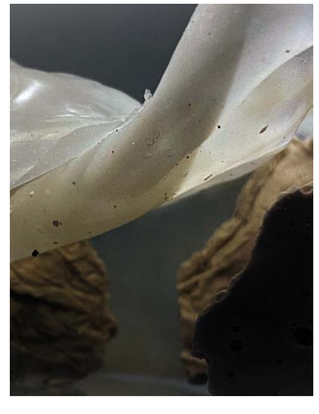
PLINTH
Gypsum
Water

Bioplastic needs to be kept in a ventilated area to avoid mould. Is it possible to place in an purposeful environment to inhibit a specific life form?

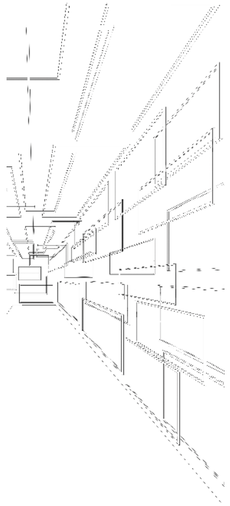
BIOPLASTIC MOULD
Gelatin
Water
Glycerol

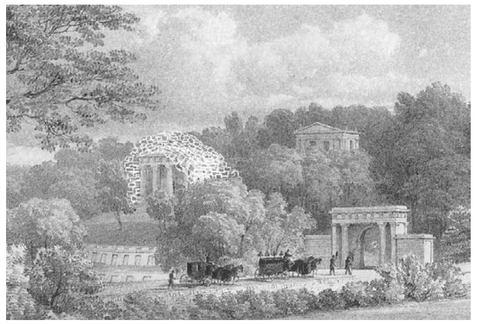
MYCELIUM REGROWTH
Mycelium substrate can be pulled apart and grown on, using the same origianal mushroom to create more material. Growing can also be stopped by heating, so there is control over the process. Every material used in the project is strong, durable, yet able to be disposed of in a sustainable way, enriching the earth as it decomposes.

"From every ruin, life springs up again and everything that dies is born again."
- Isabelle Eberhardt



DRAPING
Testing capabilities of material





COMPOSITION
Sketch over found image // Perspective drawing around chapel

Underground, the crypt space are full of mycelium slabs, the bodies are laid upon them, the mycelium will grow on top of the bodies and feed on the organic matter, in the process, the nutrients and nitrogen from the corpses will enrich the soil

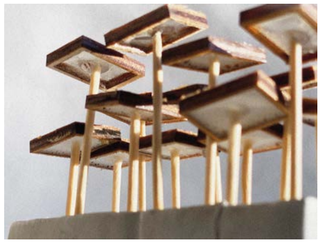
The walls are lined with soil, enabling the upper floor plantings to be enriched with the nutirents of the bodies without having to have corpses in sight

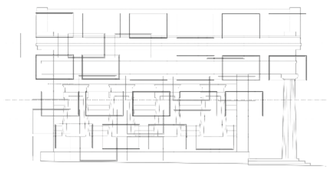
Gypsum harvested from the exterior crust on the chapel is used as a fertilser to aid the mycelium growth

The 'stoker' is in charge of keeping the fire going, using wood from the surrounding trees. He is also in charge of mixing the 'bioskin' when it is in its heating stage

The 'moulder' is in charge of pouring the 'bioskin' mixture into the mycelium moulds, and patching up any repairs, he will also collect any waste scraps of bioplastic in order to recycle them later

The 'shroomer' is in charge of general care of the mycelium, fertilising with gypsum, and growing on chunks that are in need of repair

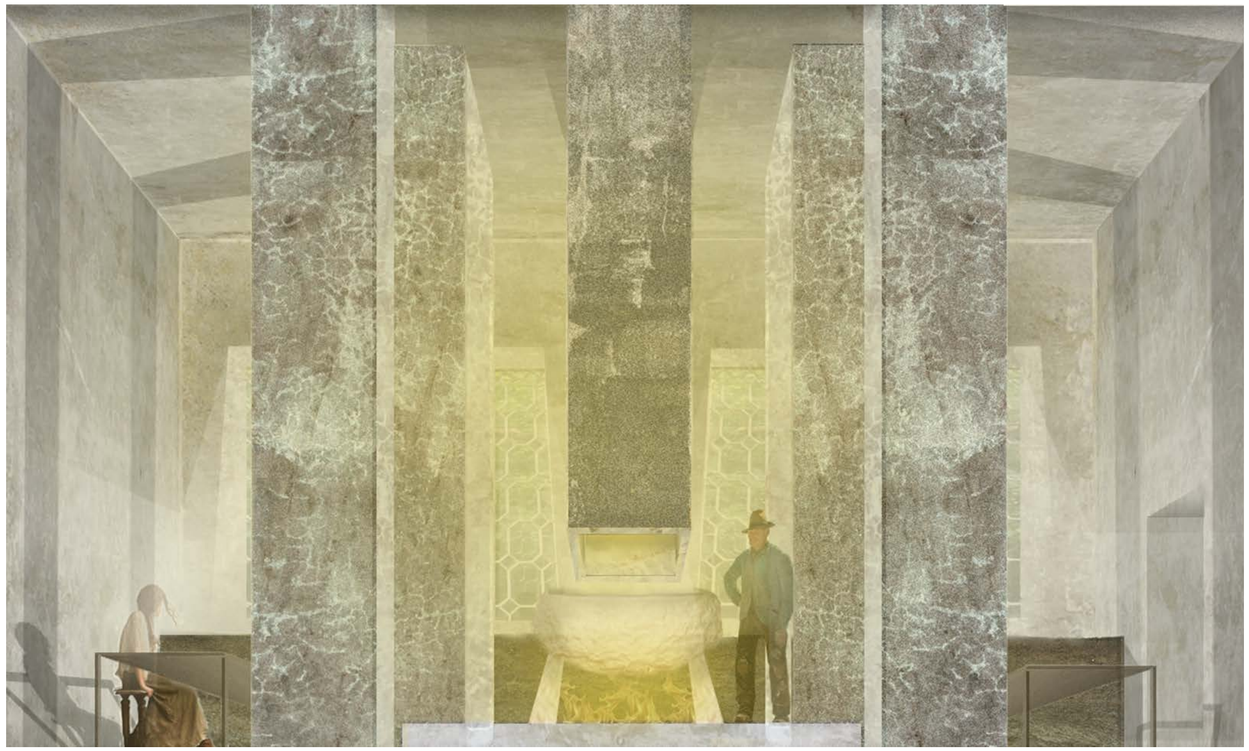




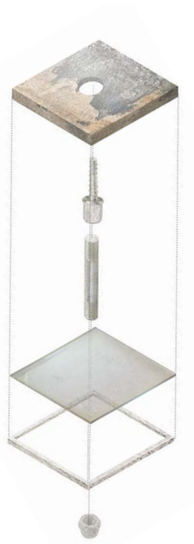
MODEL ELEVATION

BIOSKIN "CAVE" GRAVESTONE

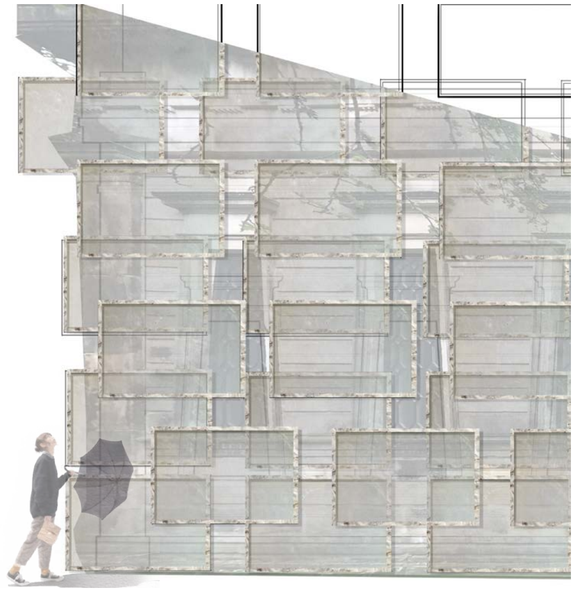
Gelatin
Water
Glycerol
Organic Matter

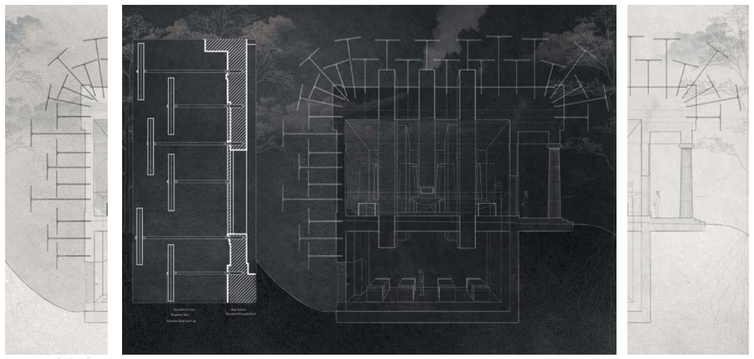


Upper floor: Workshop space with centrail fire pit and chimney, used to heat bioplastics which is required when making. Walls from top to bottom are filled with compost enriched with the nitrogen released from decomposing bodies, used to grow on mycelium. Underground is dark with chimneys letting in some daylight, mycelium needs darkness and airflow to thrive and grow on. Drainage chann either side of the chapel to collect rainwater which is used to provide moisture to the walls, again, needed for mycelium to succeed.



ASSEMBLY / ELEVATION





Mycelium Frame
Bioplastic Skin

SECTION DETAIL DRAWING
1:100
Frames placed in relation to key parts of the chapel, ie the columns, windows, roofline

OUTSIDE CHAPEL
Design of framework allows for simpler repair work and deconstruction when necessary. It allows for airflow and light to inhibit growth of pollutant cleansing mycelium..