

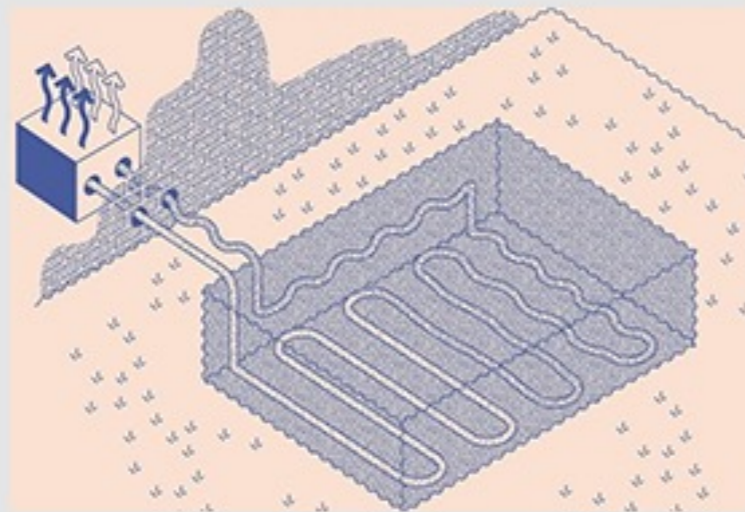
# RE- USE FOR A GREENER FUTURE !!

## TWO OVER-LAPPING WORLDS EMERGING FROM ONE SOURCE...

### Green Agenda:

We should design carefully for climate change because the way we build our cities, infrastructure and designs can have a significant impact on the environment. By designing buildings that are energy-efficient and use renewable resources, we can reduce greenhouse gas emissions and slow the pace of climate change. We can also design cities to be more resilient to extreme weather events, such as floods and heatwaves, especially cities in coastal areas. By incorporating green spaces and rain collection reservoirs. Careful design can help to protect vulnerable populations, such as the elderly and low-income communities, who are often most affected by the impacts of climate change. By designing carefully for climate change, we can help to create a more sustainable and resilient future for ourselves.

### Existing rain collecting reservoir's and ground source heat pump's: Reusing energy.



Designing in an existing building is important because it can help to reduce the environmental impact of construction and preserve historic and cultural landmarks. By adapting existing buildings, designers can avoid the energy and resource consumption associated with new construction, such as the production of building materials and the transport of construction equipment, so reducing carbon footprint of the development, this ties into the **DEGROWTH AGENDA**, This will also help to reduce greenhouse gas emissions and other environmental impacts associated with construction. Additionally, designing in existing buildings can help to preserve the character and history of a community, and can provide opportunities for adaptive reuse of buildings that might otherwise be demolished, to compromise with this, i added a 300mm rule in the church building, so any new structure stays 300mm away from the existing! This can help to maintain a sense of place and identity.

Designing in existing buildings can be more cost-effective than new construction, since many of the building's structural elements are already in place. This can help to make sustainable design more accessible and affordable to a wider range of clients and communities.



### The site: Northgate.





# NORTHGATE

## Shape shift of the site through history:

1 = 1200



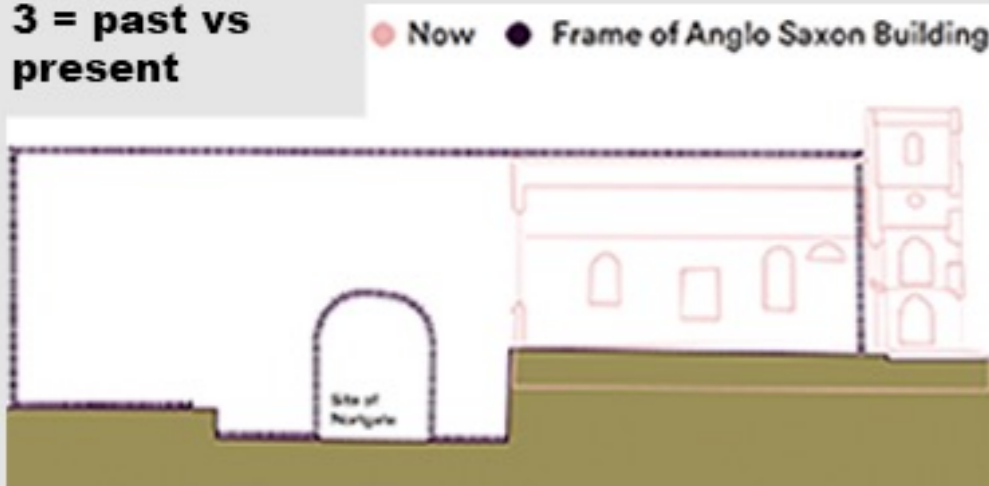
Northgate, for horse and carriage transport.

2 = 1300



St Mary's church built over Borough street, re-built to allow built to allow horse & larger carriages to go through.

3 = past vs present



Section drawing showing the shape shift of the church.

By the 14th century, St Mary's church was built to form the northgate of the city of Canterbury, connecting the two sites of Borough street as seen in images 1, 2, 3 & 4.

Its architectural shape changed over the years and by 1830 the northgate was demolished and the church was rebuilt on the north side of the road only..

5 = 1830



Plan of St Mary's church and the Jolly sailor pub, Northgate has been demolished!

6 = 2023



Our existing site plan.

## The concept and narrative:



I was inspired by the remains of Roman Canterbury's public baths, remains of Roman pottery kilns and the Franciscan botanical gardens.

I was interested in the key stories which all had similarities from where they originated from: earth, oils, growth, plants and herbs. Within the public baths the Romans used ancient oils to cleanse themselves which were stored in pots, this was the inspiration to create a pottery studio and botanical rain collecting spa as my programme.



**Initial concept collage:** Incorporating the story ideas from around Canterbury and the site, I developed a narrative for my project: two overlapping worlds emerging from one source.

The two worlds are representing my programmes incorporated into the site: A botanical rain reservoir & spa and pottery studios & a sustainable heating system.

The 'source' is the earth where the activities originated from, the rain spa coming from the oils and herbs and the pottery coming from the ground and oils.

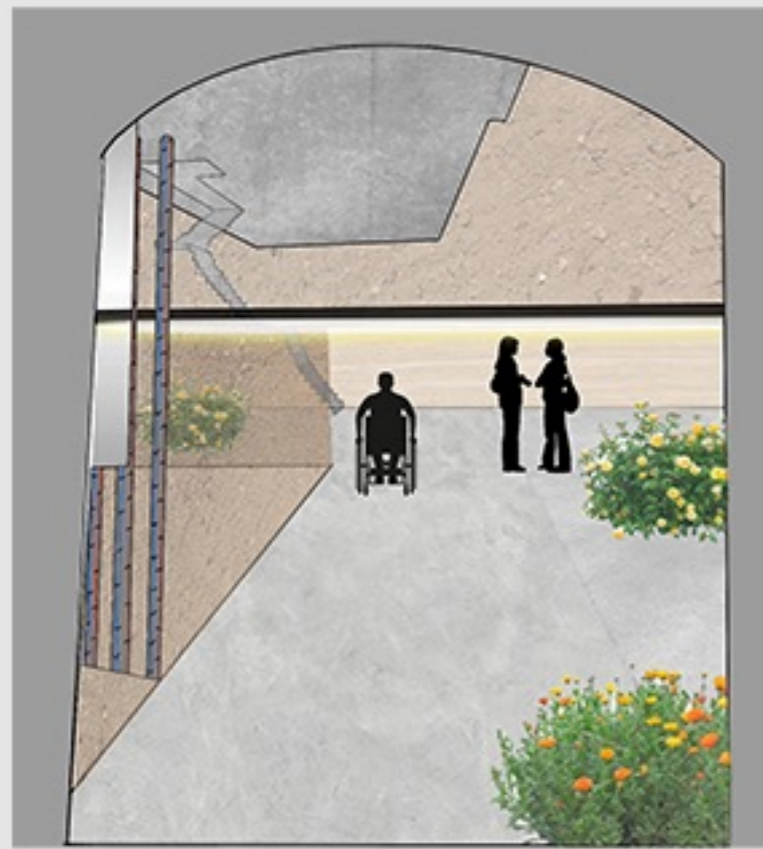


Franciscan garden's: plants and herbs used in my design and placed in the site.



## The Ground source heat pumps and Botanical rain spa.

Ground source heat pumps use the constant temperature of the earth to heat and cool buildings, which can be more energy-efficient and cost-effective than traditional heating and cooling systems. They work by circulating a fluid through pipes buried in the ground, which absorbs heat from the earth in the winter and releases it in the summer. This process can be up to 50% more efficient than traditional heating and cooling systems, which can save money on energy bills and reduce greenhouse gas emissions. They are quiet, low-maintenance, and have a long lifespan, which can make them a good investment for businesses looking to reduce their carbon footprint.



In my design proposal, The ground source heat pumps are in the foundation of the basement tunnels, which is why a large excess of space was dug down.

-The pipes are shown on the left of this image, the blue lines are the air going down and the red is the heat being forwarded up, towards the rooms and around the site.



In my design proposal the botanical herbal spa's reuse their energy.

-The bridge connecting the pub and church has the water collecting reservoir on and works by collecting the rain which goes down the slanted roof into collection holes is then filtered.

Water reservoirs provide a reliable source of water for drinking, irrigation, and other uses, especially in areas where water is scarce. They work by storing water from rivers, streams, or other sources, which can then be released as needed to meet water demands. This can help to ensure a steady supply of water, even during periods of drought or other water shortages. Reservoirs help to regulate water flow and reduce the risk of floods, which can be especially important in areas with a high risk of flooding.

## Proposed 1:100 plans with the programme's:



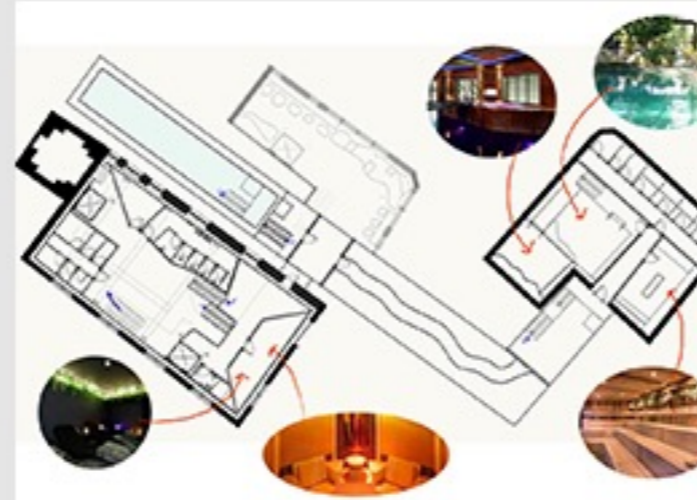
### Roof plan:

The design for the roof was to have a relaxation roof terrace on the church, purposed for after customers have had treatment they could come up here to end the sessions.



### Third floor plan:

This floor is in the rafters of the church and holds more private spaces: meditation, treatment and massage rooms.



### First and second floors plans:

The first floor holds all the essentials for a place: toilets, showers etc. The second floor has a herbal inhalation room used before entering the reservoir pool spa, this floors leads out to the connection bridge. The first floor on the pub side is a herbal sauna, pool and hot-tub.



### Basement plan:

The underground connection, with pottery studios and workspaces, as well as the ground source heat pipes.



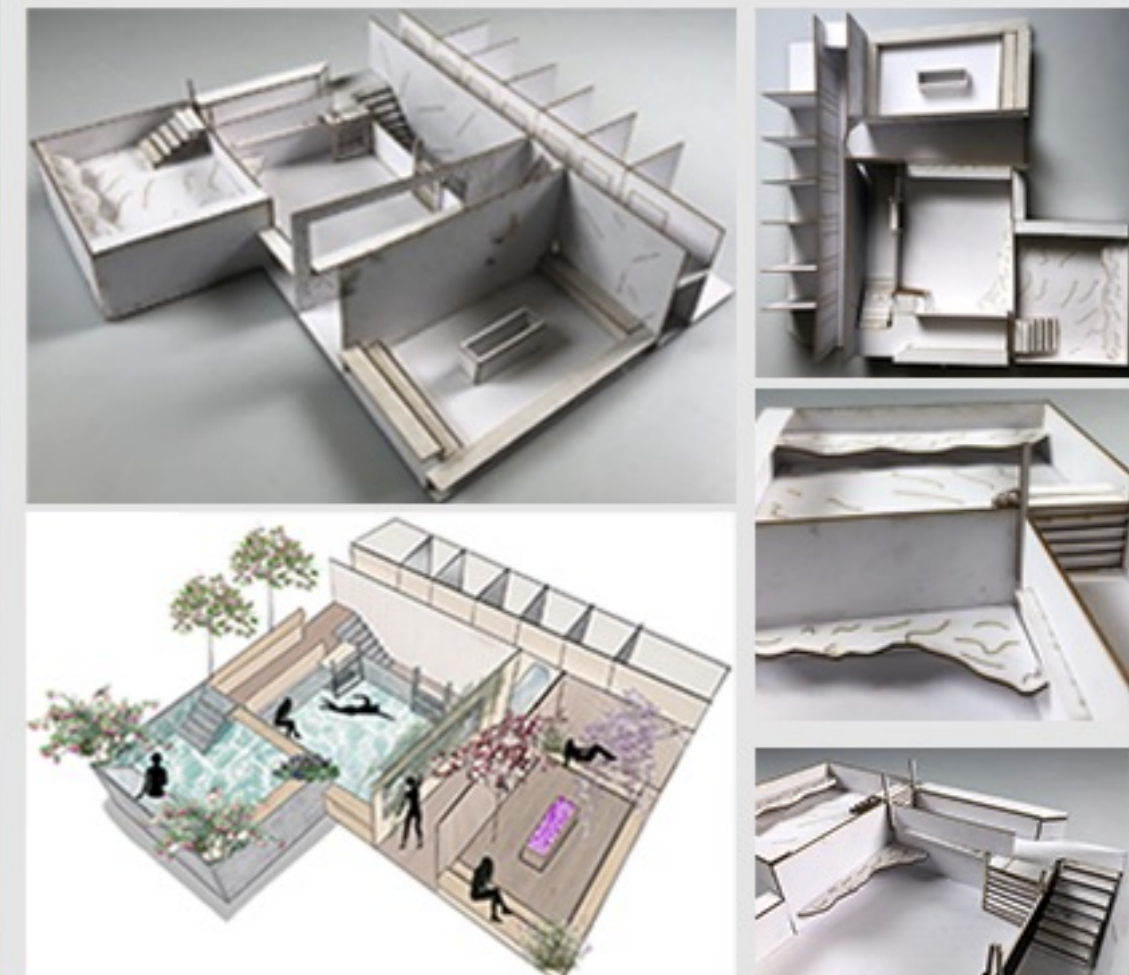
### Ground floor plan:

Entering through the tower, customers come into contact with the unique reception desk slanted at an angle, the cafe is on the lower street level which leads through to the retail and then the outdoors and upstairs seating.

## 1:50 model showing the reception, retail, cafe and the water collecting reservoir.



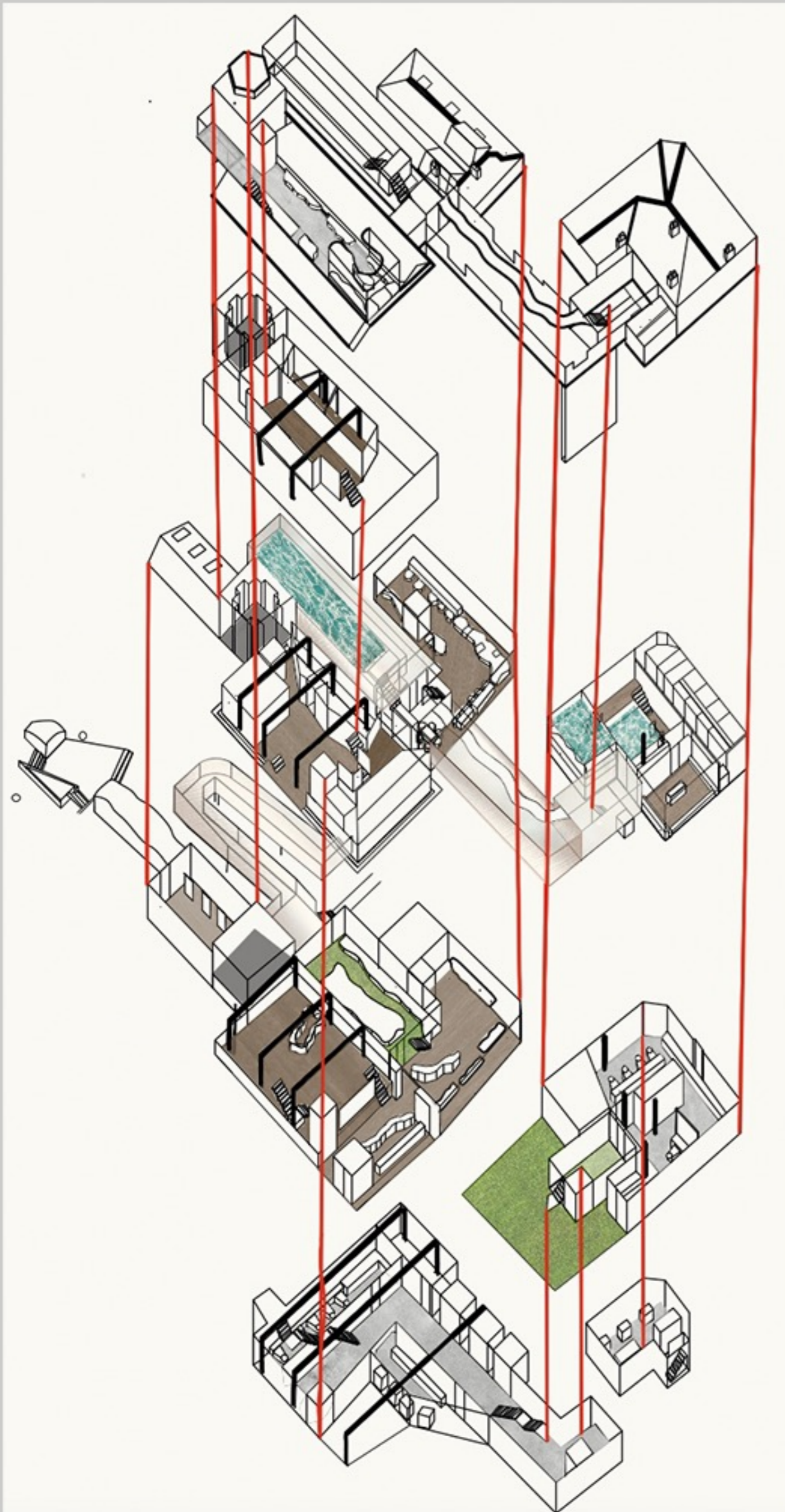
## 1:50 models showing one of the spa rooms where the water has been re-used in.





# Proposed Design.

Exploded axo of my design:



Proposed elevations and section:



1. main entrance.
2. reception desk.
3. stairs lead to the first floor and follow round.
4. stairs to pottery studios.
5. cafe and retail.
6. first floor- toilets, showerc, changing rooms.
7. second floor, herbal inhalation room.
8. third floor, private meditation, treatment and massage spaces.
9. relaxation terrace.
10. ground source heat pumps.
11. rain collecting water reservoir.
12. spa rooms.
13. pottery studios.

1:20 Model of the church:

